

DEPARTMENT OF ENERGY
FY 1999 CONGRESSIONAL BUDGET REQUEST
NON-DEFENSE ENVIRONMENTAL MANAGEMENT

PROPOSED APPROPRIATION LANGUAGE

For Department of Energy Expenses, including the purchase, construction and acquisition of plant and capital equipment and other expenses necessary for non-defense environmental management activities in carrying out the purposes of the Department of Energy Organization Act (42 U.S.C. 7101 et seq.), including the acquisition or condemnation of any real property or any facility or for plant or facility acquisition, construction or expansion, [\$497,059,000] \$462,000,000 to remain available until expended (*Energy and Water Development Appropriations Act, 1998.*)

EXPLANATION OF CHANGE

None.

DEPARTMENT OF ENERGY
FY 1999 CONGRESSIONAL BUDGET REQUEST
NON-DEFENSE ENVIRONMENTAL MANAGEMENT
(Tabular dollars in thousands, narrative in whole dollars)

ENVIRONMENTAL MANAGEMENT

PROGRAM MISSION

The Environmental Management (EM) program is responsible for managing and addressing the environmental legacy resulting from nuclear energy and weapons research activities. The nuclear energy research and development efforts of DOE and its predecessors generated waste, pollution, and contamination which pose unique problems, including unprecedented volumes of contaminated soil and water, radiological hazards from special nuclear material, and a vast number of contaminated structures. Much of this infrastructure, waste, and contamination still exists and is largely maintained, decommissioned, managed, and remediated by the EM program, which is sometimes referred to as the “cleanup program.”

Today, the EM program is the world’s largest environmental stewardship program. The 87 geographic sites (adjusted for transfer of Formerly Utilized Sites Remedial Action Program to the U. S. Army Corps of Engineers) in 31 States and one territory have different functions, environments, and degrees and types of contamination. Some of the program’s distinct characteristics include the presence of extremely hazardous materials in unstable conditions (i.e., high-level radioactive waste tanks and unstable Plutonium mixtures); extensive legally enforceable agreements with State and Federal regulators; and the presence of formal citizen advisory boards at the major DOE sites.

This program is budgeted under five appropriation accounts: Defense Facilities Closure Projects, Defense Environmental Restoration and Waste Management, Non-Defense Environmental Management, Uranium Enrichment Decontamination and Decommissioning Fund, and Defense Environmental Management Privatization. The FY 1999 request for Non-Defense Environmental Management is \$462,000,000, a decrease of about \$35 million from the FY 1998 appropriation. EM manages and cleans up sites used for civilian, energy research, non-defense related programs under this appropriation.

The EM program has established a goal of cleaning up as many of its contaminated sites as possible by 2006, in a safe and cost-effective manner. By working towards this goal, EM can reduce the hazards presently facing its workforce and the public, and reduce the financial burden on the taxpayer. The FY 1999 budget request and structure reflect the program’s increased emphasis on site closure and project completion--in other words, finishing our work as quickly as possible.

Pursuant to the FY 1998 House Energy and Water Development Report (House Report 105-190), no program management costs, technical assistance contracts, nor support service contracts are funded in the Non-Defense Environmental Management account.

PROGRAM MISSION - NON-DEFENSE ENVIRONMENTAL MANAGEMENT (continued)

Major Changes

- **Fast Flux Test Facility:** Funding responsibility for this facility at the Hanford Site in Washington has been transferred back to the Office of Nuclear Energy in FY 1999 after being requested in the EM Nuclear Material and Facility Stabilization program in FY 1998.

DEPARTMENT OF ENERGY
FY 1999 CONGRESSIONAL BUDGET REQUEST
NON-DEFENSE ENVIRONMENTAL MANAGEMENT
(dollars in thousands)

PROGRAM FUNDING PROFILE

Activity	FY 1997 Adjusted Approp	FY 1998 Adjusted Approp	FY 1999 Cong Request
Site Closure	\$266,684	\$269,911	\$254,344
Site/Project Completion	139,594	113,950	97,248
Post 2006 Completion	155,178	82,294	83,908
Science and Technology	0	0	26,500
Subtotal, EM	\$561,456	\$466,155	\$462,000
Use of Prior Year Balances (Offset)	(11,657)	0	0
FFTF Transfer to NE	0	30,904	0
<i>TOTAL, NON-DEFENSE</i>	<u><u>\$549,799</u></u>	<u><u>\$497,059</u></u>	<u><u>\$462,000</u></u>

DEPARTMENT OF ENERGY
FY 1999 CONGRESSIONAL BUDGET REQUEST
NON-DEFENSE ENVIRONMENTAL MANAGEMENT
(dollars in thousands)

PROGRAM FUNDING BY SITE

<u>Operations/Field Office and Location</u>	<u>FY 1997 Adjusted Approp</u>	<u>FY 1998 Adjusted Approp</u>	<u>FY 1999 Cong Request</u>
ALBUQUERQUE			
Grand Junction Office	\$33,035	\$40,028	\$41,413
Inhalation Toxicology Research Inst	919	743	478
Los Alamos Nat'l Lab	4,000	0	0
UMTRA - Surface	41,074	35,686	22,394
UMTRA - Groundwater	<u>7,132</u>	<u>5,400</u>	<u>5,902</u>
Total, Albuquerque	86,160	81,857	70,187
CHICAGO			
Ames Lab	287	260	260
Argonne National Lab-East	20,253	12,013	17,006
Argonne National Lab-West	6,665	3,600	2,711
Brookhaven National Lab	28,306	24,900	24,300
Chicago Ops Office	1,047	1,551	597
FERMI Lab	2,100	0	0
Princeton Plasma Physics Lab	<u>3,699</u>	<u>3,389</u>	<u>4,626</u>
Total, Chicago	62,357	45,713	49,500

<u>Operations/Field Office and Location</u>	<u>FY 1997 Adjusted Approp</u>	<u>FY 1998 Adjusted Approp</u>	<u>FY 1999 Cong Request</u>
IDAHO			
Idaho Nat'l Engineering Lab	<u>15,734</u>	<u>7,171</u>	<u>10,263</u>
Total, Idaho	15,734	7,171	10,263
OAK RIDGE			
FUSRAP	73,970	0	0
Oak Ridge Nat'l Lab	33,190	44,940	51,597
Oak Ridge Ops Office	6,583	1,523	1,574
Oak Ridge Reservation	22,567	21,924	19,597
Weldon Springs Site	<u>63,689</u>	<u>65,800</u>	<u>65,000</u>
Total, Oak Ridge	199,999	134,187	137,768
OAKLAND			
General Atomics	3,600	4,100	2,030
General Electric	0	106	519
Geothermal Test Facility	1,000	0	0
Lawrence Berkeley Lab	8,748	11,177	10,668
Oakland Ops Office	3,955	687	0
Stanford Linear Acceler Center	995	995	1,000
U.C. Davis/LEHR	4,007	5,156	4,389
Energy Technology Engin Ctr/SSFL	<u>16,824</u>	<u>17,426</u>	<u>16,494</u>
Total, Oakland	39,129	39,647	35,100

<u>Operations/Field Office and Location</u>	<u>FY 1997 Adjusted Approp</u>	<u>FY 1998 Adjusted Approp</u>	<u>FY 1999 Cong Request</u>
OHIO			
Battelle Columbus Lab	2,395	7,749	8,532
Mound Plant	998	992	1,003
West Valley Demonstration Proj	<u>118,361</u>	<u>114,256</u>	<u>110,100</u>
Total, Ohio	121,754	122,997	119,635
 RICHLAND	 21,455	 20,676	 1,907
 SAVANNAH RIVER	 4,206	 4,248	 0
 SCIENCE AND TECHNOLOGY	 0	 0	 26,500
 MULTI-SITE ACTIVITIES	 <u>10,662</u>	 <u>9,659</u>	 <u>11,140</u>
 SUBTOTAL, EM	 \$561,456	 \$466,155	 \$462,000
Use of Prior Year Balances	(11,657)	0	0
FFTF Transfer to NE	<u>0</u>	<u>30,904</u>	<u>0</u>
TOTAL, EM	<u><u>\$549,799</u></u>	<u><u>\$497,059</u></u>	<u><u>\$462,000</u></u>

DEPARTMENT OF ENERGY
FY 1999 CONGRESSIONAL BUDGET REQUEST
NON-DEFENSE ENVIRONMENTAL MANAGEMENT
SITE CLOSURE
(Tabular dollars thousands, narrative in whole dollars)

PROGRAM MISSION

The SITE CLOSURE account includes funding for sites for which the Environmental Management program has established a goal of completing EM's cleanup mission by the end of FY 2006. After EM's cleanup mission is complete at these sites, no further Departmental mission is envisioned, except for limited long-term surveillance and maintenance, and the sites will be available for some alternative use. Within the Non-Defense Environmental Management appropriation, the SITE CLOSURE account includes funding for the West Valley Demonstration Project in New York, the Battelle Columbus Laboratory and the Mound Plant in Ohio, projects under the Grand Junction Office in Colorado, Uranium Mill Tailings Remedial Action Surface and Ground Water Projects at various locations, and the Weldon Springs Site in Missouri.

The SITE CLOSURE account within the Non-Defense Environmental Management appropriation is intended to highlight those sites where cleanup can be accelerated and substantial savings achieved by the resulting reduction in long-term program costs and ongoing support costs. By completing cleanup and other environmental management activities at these locations, outyear maintenance costs can be avoided and overall life-cycle costs reduced.

DEPARTMENT OF ENERGY
FY 1999 CONGRESSIONAL BUDGET REQUEST
NON-DEFENSE ENVIRONMENTAL MANAGEMENT
SITE CLOSURE
(Dollars in thousands)

PROGRAM FUNDING PROFILE

<u>Subprogram</u>	FY 1997 Adjusted <u>Appropriation</u>	FY 1998 Adjusted <u>Appropriation</u>	FY 1999 Budget <u>Request</u>
Remedial Action/Release Sites	\$130,946	\$130,577	\$127,580
Facility Decommissioning	5,544	7,830	4,939
High Level Waste	74,482	70,085	67,400
Mixed Low-Level Waste	97	284	0
Low-Level Waste	1,444	1,791	1,465
Spent Nuclear Fuel Stabilization	768	2,171	2,800
Landlord	21,154	25,570	22,298
Long-Term Monitoring	1,371	1,298	1,426
Program Support	29,978	30,005	25,030
Uranium Leasing	<u>900</u>	<u>300</u>	<u>1,406</u>
 TOTAL, SITE CLOSURE, Non-Defense	 \$266,684	 \$269,911	 \$254,344
 Operations and Maintenance [non-add]	 [\$266,684]	 [\$269,911]	 [\$254,344]
Construction [non-add]	[\$0]	[\$0]	[\$0]

SITE CLOSURE - NON-DEFENSE - PROGRAM FUNDING PROFILE (cont'd)

Public Law Authorizations

Pub. Law 95-91, Department of Energy Organization Act (1977)

Pub. Law 95-604, Uranium Mill Tailings Radiation Control Act (1978)

Pub. Law 105-62, The Energy and Water Development Appropriations Act, Fiscal Year 1998

DEPARTMENT OF ENERGY
FY 1999 CONGRESSIONAL BUDGET REQUEST
NON-DEFENSE ENVIRONMENTAL MANAGEMENT
SITE CLOSURE
(Dollars in thousands)

PROGRAM FUNDING BY SITE

	FY 1997 Adjusted <u>Appropriation</u>	FY 1998 Adjusted <u>Appropriation</u>	FY 1999 Budget <u>Request</u>
<u>Field Offices/Sites</u>			
ALBUQUERQUE OPERATIONS OFFICE			
Grand Junction Office (CO)	\$33,035	\$40,028	\$41,413
UMTRA - Groundwater (VL)	7,132	5,400	5,902
UMTRA - Surface (VL)	<u>41,074</u>	<u>35,686</u>	<u>22,394</u>
Subtotal, ALBUQUERQUE	\$81,241	\$81,114	\$69,709
OAK RIDGE OPERATIONS OFFICE			
Weldon Springs Site Remedial Action Project (MO)	<u>\$63,689</u>	<u>\$65,800</u>	<u>\$65,000</u>
Subtotal, OAK RIDGE	\$63,689	\$65,800	\$65,000
OHIO FIELD OFFICE			
Battelle Columbus Lab (OH)	\$2,395	\$7,749	\$8,532
Mound Plant (OH)	998	992	1,003
West Valley Demonstration Project (NY)	<u>118,361</u>	<u>114,256</u>	<u>110,100</u>
Subtotal, OHIO	\$121,754	\$122,997	\$119,635
TOTAL, SITE CLOSURE, Non-Defense	<u>\$266,684</u>	<u>\$269,911</u>	<u>\$254,344</u>

SITE CLOSURE - NON-DEFENSE

ALBUQUERQUE

I. Mission Supporting Goals and Objectives:

MISSION

The Environmental Management (EM) Program, managed through the Albuquerque Operations Office, supports activities at two sites in two states, and the Uranium Mill Tailings Remedial Action (UMTRA) Surface and Groundwater projects. These sites are the Grand Junction Office (GJO) site in Colorado and the Monticello millsite cleanup in Utah.

2006 STRATEGY

In accordance with the Draft 2006 Plan, the Albuquerque Operations Office goal is to complete cleanup of all geographic sites under this account by FY 2006. Continued Albuquerque progress will culminate in the completion of the UMTRA Surface Project remedial actions in FY 1998 (24 sites) and closeout of the Project in FY 1999. At the request of the State of North Dakota, steps are being taken to revoke the designation of the two North Dakota sites from the UMTRA Surface Project, reducing the total number of UMTRA-Surface sites to 22. Completion of the UMTRA Surface Project is allowing funding to be reallocated to other Albuquerque projects, even as funding levels are being reduced.

FY 1999 PROGRAM

The GJO is located immediately south of the City of Grand Junction, Colorado, on a 61.7-acre site adjacent to the Gunnison River. The GJO supports environmental management activities in the areas of site characterization, project integration and coordination, remedial design, remedial action, independent verification, decontamination and dismantlement (D&D), and long-term surveillance and maintenance (LTSM). Current GJO project assignments include the Monticello millsite and vicinity properties cleanup, the GJO Remedial Action Project, the Long-Term Surveillance and Maintenance Program, the Uranium Leasing Project, the GJO Waste Management Program, the GJO Landlord Program, and the UMTRA Ground Water Project.

GJO Program is comprised of 22 release sites and 44 facilities. Through FY 1997, three release sites and 16 facilities were

SITE CLOSURE - NON-DEFENSE - ALBUQUERQUE (cont'd)

I. Mission Supporting Goals and Objectives: (cont'd)

FY 1999 PROGRAM (cont'd)

completed; six release sites are scheduled in FY 1998; and one release site is scheduled for completion in FY 1999. Environmental cleanup efforts at and around Monticello, Utah, include remedial action on a 110-acre inactive Government-owned uranium/vanadium mill processing site and the adjacent private and Department of Energy (DOE)-owned peripheral properties, assessment and remediation of surface and ground water contamination near Monticello, and remediation of approximately 400 private properties (referred to as "Vicinity Properties") which have been contaminated by mill tailings from the Monticello millsite. Key activities in FY 1999 are to continue Monticello millsite cleanup and complete the closeout of Monticello vicinity properties.

The UMTRA Surface Project was created by Public Law 95-604, "The Uranium Mill Tailings Radiation Control Act of 1978," which authorizes the Department to conduct a mill tailings stabilization and control program at 24 former uranium ore processing sites that are contaminated with tailings and other byproducts of uranium mining and milling operations. The program includes an estimated 5,000 associated vicinity properties which became contaminated by windblown waste or debris or contaminated materials used in construction or landscaping. Each mill tailings processing site is comprised of one release site. The UMTRA Surface Project activity supports efforts in ten states (Arizona, Colorado, Idaho, New Mexico, North Dakota, Oregon, Pennsylvania, Texas, Utah, and Wyoming) and with two Indian tribes. The UMTRA Surface Project is a cost-shared project with the Federal Government paying 90 percent of the remedial action cost and the States paying ten percent. When the sites are on Indian lands, the Department pays the entire cost of the remedial action. Remedial action has been completed for 20 of the 24 former uranium ore processing sites as of the end of FY 1997. Two additional sites (Maybell and Naturita, CO) are scheduled for remedial action completion in FY 1998. Currently, at the request of the State of North Dakota, steps are being taken to revoke the designation of the two North Dakota sites from the UMTRA Surface Project.

The UMTRA Amendments Act of 1988 (P.L. 100-616) extended the Department's authority to conduct remedial actions at the designated sites through the end of FY 1994. Public Law 104-259, signed by President Clinton on October 9, 1996, provides a final extension through FY 1998, to allow orderly termination of the Surface Project. It also authorizes the Cheney disposal site

SITE CLOSURE - NON-DEFENSE - ALBUQUERQUE (cont'd)

I. Mission Supporting Goals and Objectives: (cont'd)

FY 1999 PROGRAM (cont'd)

in Grand Junction, CO, to remain open for up to 25 years to accept vicinity property or ground water wastes from Title I sites and vicinity property material from the Monticello, Utah Project after the Monticello cell closes.

The UMTRA Ground Water Project will carry out additional characterization and compliance efforts, not covered by the UMTRA Surface Project, at 22 designated uranium mill tailings sites. The project was initially authorized by Public Law 95-604. Each mill tailings site is comprised of a ground water release site. Public Law 100-616 authorized ground water compliance activities for an unlimited period of time. Where remedial action activities are required, the Department will pay 90 percent of the costs; the States will pay ten percent. The Department is responsible for the entire cost of the remedial action for sites on Indian lands. Key activities in FY 1999 are to implement active ground water compliance activities at the Monument Valley site and to complete remedial action at four sites (Mexican Hat and Salt Lake City, UT; Canonsburg, PA; and Falls City, TX).

II. Funding Schedule:

<u>Program Activity</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>	<u>\$ Change</u>	<u>% Change</u>
Remedial Action/Release Sites	\$ 67,257	\$ 64,777	\$ 62,580	\$ -2,197	-3%
Facility Decommissioning	4,692	4,500	53	-4,447	-99%
Landlord	5,154	7,900	4,244	-3,656	-46%
Long-Term Surveillance and Maintenance +10%		1,371	1,298	1,426	+128
Program Support	1,867	2,339	0	-2,339	-100%
Uranium Leasing	<u>900</u>	<u>300</u>	<u>1,406</u>	<u>+1,106</u>	<u>+369%</u>
TOTAL, Albuquerque	<u>\$ 81,241</u>	<u>\$ 81,114</u>	<u>\$ 69,709</u>	<u>\$ -11,405</u>	<u>-14%</u>

SITE CLOSURE - NON-DEFENSE - ALBUQUERQUE (cont'd)

III. Performance Summary - Accomplishments:

[PBS Numbers are Bracketed in the Text]

FY 1997

FY 1998

FY 1999

Remedial Action/Release Sites

Carry out Monticello millsite remediation and repository construction activities and other Grand Junction Office (GJO) remedial action sites. [AL022 and AL024]

\$15,218

\$17,276

\$27,327

- In FY 1997, initiated millsite remediation; completed 1 of 20 remaining GJO release sites.
- In FY 1998, continue millsite remediation of high risk contamination; complete 6 of 19 remaining GJO release sites.
- In FY 1999, continue millsite remediation of high risk contamination and complete mill site restoration design; complete 1 of 13 remaining GJO release sites.

Carry out Monticello vicinity and peripheral property remediation activities. [AL022 and AL024]

\$2,700

\$530

\$4,249

- In FY 1997, continued remedial action on peripheral and vicinity properties; closed out one vicinity property OU.
- In FY 1998, complete cleanup of vicinity properties; close-out six vicinity property OUs.
- In FY 1999, complete cleanup of peripheral properties; close-out one vicinity property OU.

Conduct various Monticello Surface and Ground Water Project activities. [AL022 and AL024]

\$1,133

\$5,885

\$2,708

- In FY 1997, prepared and submitted draft Monticello Surface and Ground Water Project Remedial Investigation/Feasibility Study and interim Record of Decision (ROD) to the Environmental Protection Agency (EPA) and State of Utah for review; initiated remediation of the Montezuma Creek Canyon.

SITE CLOSURE - NON-DEFENSE - ALBUQUERQUE (cont'd)

III. Performance Summary - Accomplishments: (cont'd)

Remedial Action/Release Sites (cont'd)

FY 1997 **FY 1998** **FY 1999**

- In FY 1998, complete remediation of contaminated sediments in the lower Montezuma Creek Canyon (includes \$40,000 for payment for a stipulated penalty assessed against the Monticello Project); initiate interim remedial action for ground water; continue analysis and conduct field studies in support of Monticello Surface and Ground Water Project ROD.
- In FY 1999, continue cleanup of the Montezuma Creek Canyon; continue interim remedial action for ground water; continue analysis and conduct field studies in support of Monticello surface and ground water project ROD.

Subtotal, Remedial Action/Release Sites, Various Sites

\$19,051

\$23,691

\$34,284

UMTRA Surface:

Carry out remediation efforts at six sites in Colorado; Maybell, Naturita, Rifle (two sites) and Slick Rock (two sites). [AL020]

\$26,536

\$25,094

\$619

- In FY 1997, completed remediation at four sites (Rifle--2 sites and Slick Rock--2 sites); completed additional Vicinity Properties (VP) and accelerated schedules where slippage had occurred.
- In FY 1998, complete remedial action at Maybell and Naturita; close out remedial action subcontracts and prepare completion reports.
- In FY 1999, close-out remediation contract.

SITE CLOSURE - NON-DEFENSE - ALBUQUERQUE (cont'd)

III. Performance Summary - Accomplishments: (cont'd)

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Remedial Action/Release Sites</u> (cont'd)			
UMTRA Surface: (cont'd)			
Surveillance, certification, and licensing activities. [AL020]	\$3,515	\$815	\$975
<ul style="list-style-type: none"> • In FY 1997, continued surveillance, certification, and licensing activities on all sites. • In FY 1998, continue surveillance, certification, and licensing activities on all sites. • In FY 1999, complete certification and licensing activities. 			
Provide for Grand Junction, CO site activities. [AL020]	\$7,305	\$5,025	\$0
<ul style="list-style-type: none"> • In FY 1997, completed remedial action at six VP and continued operation and maintenance activities at the Cheney disposal cell. • In FY 1998, complete remedial action of all remaining VP; continue operation and maintenance activities at the Cheney disposal cell; and shift responsibility for the Cheney disposal cell to the GJO LTSM Program, effective in April 1998. • In FY 1999, no activity. 			
Complete closeout of prime contracts; finalize cooperative agreements; closeout subcontracts, and perform all remaining project termination activities. [AL020]	\$3,718	\$4,752	\$20,800
<ul style="list-style-type: none"> • In FY 1997, performed all project management activities including payments to states and tribes under cooperative agreements and payments to the NRC for licensing activities support. • In FY 1998, initiate closeout of prime contracts; finalization of cooperative agreements, and performance of project termination activities. • In FY 1999, complete final project closeout activities for prime contracts, cooperative agreements, and subcontracts. 			
Subtotal, Remedial Action/Release Sites, UMTRA Surface	<u>\$41,074</u>	<u>\$35,686</u>	<u>\$22,394</u>

SITE CLOSURE - NON-DEFENSE - ALBUQUERQUE (cont'd)

III. Performance Summary - Accomplishments: (cont'd)

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Remedial Action/Release Sites</u> (cont'd)			
UMTRA Ground Water:			
Completed the Programmatic Environmental Impact Statement; published the ROD. [AL023]	\$20	\$0	\$0
Conduct activities at the Rifle, CO (two sites) and Riverton, WY sites. [AL023]	\$1,627	\$1,520	\$484
<ul style="list-style-type: none"> • In FY 1997, completed Rifle, CO interim action (alternate water supply), initiated Riverton, WY interim action (alternate water supply), and continued site investigations. • In FY 1998, complete assessment activities and complete alternate water supply for Riverton, WY; initiate Site Operational Work Plan (SOWP) and complete site characterization for Rifle, CO (two sites). • In FY 1999, initiate remedial action at Riverton, WY and complete SOWP for Rifle, CO (two sites). 			
Conduct activities at Maybell, CO; Spook, WY; and Mexican Hat, UT sites. [AL023]	\$93	\$63	\$58
<ul style="list-style-type: none"> • In FY 1997, completed assessment activities and remedial actions for the Maybell, CO and Spook, WY sites. • In FY 1998, complete assessment of the Mexican Hat, UT site. • In FY 1999, complete remedial action of the Mexican Hat, UT site. 			
Carry out activities at the Ambrosia Lake, NM; Falls City, TX; and Canonsburg, PA sites. [AL023]	\$425	\$288	\$74
<ul style="list-style-type: none"> • In FY 1997, conducted site investigations at Ambrosia Lake, NM, and Canonsburg, PA; performed monitoring at Falls City, TX. • In FY 1998, complete assessment activities for Canonsburg, PA and Falls City, TX; and complete assessment activities and remedial action for Ambrosia Lake, NM. • In FY 1999, complete remedial actions for Canonsburg, PA and Falls City, TX. 			

SITE CLOSURE - NON-DEFENSE - ALBUQUERQUE (cont'd)

III. Performance Summary - Accomplishments: (cont'd)

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Remedial Action/Release Sites</u> (cont'd)			
UMTRA Ground Water: (cont'd)			
Conduct activities at the Monument Valley, AZ and Tuba City, AZ sites. [AL023]	\$3,115	\$1,667	\$3,810
<ul style="list-style-type: none"> • In FY 1997, completed site investigations for both sites and conducted an Innovative Treatment Remediation Demonstration (ITRD) review with stakeholder involvement to assess cost-effective alternatives for Tuba City, AZ. • In FY 1998, complete National Environmental Policy Act (NEPA) documentation and initiate alternate water supply for Monument Valley, AZ; and complete assessment activities for Tuba City, AZ. • In FY 1999, complete the assessment activities and initiate remedial action at the Monument Valley, AZ site. 			
Conduct activities at the Durango, CO; Gunnison, CO; Grand Junction, CO; Salt Lake City, UT; Green River, UT; and Shiprock, NM sites. [AL023]	\$1,707	\$1,770	\$992
<ul style="list-style-type: none"> • In FY 1997, conducted site characterization at all sites except Salt Lake City, UT; continued monitoring efforts. • In FY 1998, complete site characterization and initiate SOWP for Grand Junction, CO; complete assessment of Salt Lake City, UT; initiate field investigations at Shiprock, NM; and perform monitoring for remaining sites. • In FY 1999, complete assessment activities for Grand Junction, CO; complete remedial action for Salt Lake City, UT; and initiate field investigations or perform monitoring at remaining sites. 			

SITE CLOSURE - NON-DEFENSE - ALBUQUERQUE (cont'd)

III. Performance Summary - Accomplishments: (cont'd)

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Remedial Action/Release Sites</u> (cont'd)			
UMTRA Ground Water: (cont'd)			
Conduct activities at the Slick Rock, CO (two sites); Naturita, CO; and Lakeview, OR, sites. [AL023]	\$145	\$92	\$484
<ul style="list-style-type: none"> • In FY 1997, performed monitoring at all four sites. • In FY 1998, perform monitoring at all four sites. • In FY 1999, perform monitoring at all four sites. 			
Subtotal, Remedial Action/Release Sites, UMTRA Ground Water	<u>\$7,132</u>	<u>\$5,400</u>	<u>\$5,902</u>
Subtotal, Remedial Action/Release Sites	<u>\$ 67,257</u>	<u>\$ 64,777</u>	<u>\$ 62,580</u>
<u>Facility Decommissioning</u>			
Provide for decontamination/demolition of buildings at Grand Junction Office. [AL024]	\$4,692	\$4,500	\$53
<ul style="list-style-type: none"> • In FY 1997, completed decontamination of seven of the remaining 35 buildings (facilities). • In FY 1998, payment for mill tailings disposal at Cheney; continue environmental monitoring; no facility completion. • In FY 1999, continue environmental monitoring; no facility completion. 			
Subtotal, Facility Decommissioning	<u>\$4,692</u>	<u>\$4,500</u>	<u>\$53</u>

SITE CLOSURE - NON-DEFENSE - ALBUQUERQUE (cont'd)

III. Performance Summary - Accomplishments: (cont'd)

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Landlord</u>			
Provide support of Grand Junction Office activities [AL024]; and Monticello stakeholder activities.	\$5,154	\$7,900	\$4,244
<ul style="list-style-type: none"> • In FY 1997, provided for waste management/landlord activities and overall program management support, including an AIP with the State of Utah for Monticello. • In FY 1998, provide for waste management/landlord activities and overall program management support and initiate reimburse former site contractor for contract closeout. • In FY 1999, provide for waste management/landlord activities and overall program management support and continue to reimburse former site contractor for contract closeout. 			
Subtotal, Landlord	\$5,154	\$7,900	\$4,244
<u>Long-Term Surveillance and Maintenance (Remediation)</u>			
Carry out LTSM Program activities at the Grand Junction Office. [AL024]	\$1,371	\$1,298	\$1,426
<ul style="list-style-type: none"> • In FY 1997, continued LTSM activities for Title I sites, transferred Title II sites, and other transfer sites. • In FY 1998, continue LTSM activities for Title I sites, transferred Title II sites, and other transfer sites. • In FY 1999, continue LTSM activities for additional Title I sites, transferred Title II sites, and other transfer sites. 			
Subtotal, Long-Term Surveillance and Maintenance (Remediation)	\$1,371	\$1,298	\$1,426

SITE CLOSURE - NON-DEFENSE - ALBUQUERQUE (cont'd)

III. Performance Summary - Accomplishments: (cont'd)

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Program Support</u>			
Program support activities for Grand Junction Office [AL024] and outreach activities.	\$1,867	\$2,339	\$0
<ul style="list-style-type: none"> • In FY 1997, continued support and community outreach. • In FY 1998, continue support and community outreach. • In FY 1999, continue support and community outreach using prior year carryover. 			
Subtotal, Program Support	<u>\$1,867</u>	<u>\$2,339</u>	<u>\$0</u>
<u>Uranium Leasing</u>			
DOE-EM manages the leases on Federally owned lands where there is mining and milling of uranium ores.			
Provide support for the Uranium Lease Program. [AL024]	900	300	1,406
<ul style="list-style-type: none"> • In FY 1997, provided required support for leasing activities. • In FY 1998, continue leasing support activities. • In FY 1999, continue leasing support activities and reclaim lease tracts where no lease holder is liable. 			
Subtotal, Uranium Leasing	<u>\$ 900</u>	<u>\$ 300</u>	<u>\$ 1,406</u>
TOTAL, ALBUQUERQUE	<u>\$ 81,241</u>	<u>\$ 81,114</u>	<u>\$ 69,709</u>

SITE CLOSURE - NON-DEFENSE - ALBUQUERQUE (cont'd)

Explanation of Funding Changes From FY 1998 to FY 1999:

<u>Remedial Action/Release Sites:</u> Increase is for the completion of the design efforts for the Monticello mill site restoration design and cleanup of peripheral properties.	\$+10,593
Decrease due to the closeout of UMTRA Surface Project.	\$-13,292
Net increase of UMTRA Ground Water due to initiation of active remediation strategy at one site, \$+502 Monument Valley, and decrease due to completion at other sites.	
<u>Facility Decommissioning:</u> Decrease results from the lump sum payment in FY 1998 for GJPO Remedial Action Project materials disposal at the Cheney site, as well as funds being redirected to increase Monticello remedial actions.	\$-4,447
<u>Landlord:</u> Decrease due to lower overall program management costs.	\$-3,656
<u>Program Support:</u> Prior year carryover will be utilized for theses activities.	\$-2,339
<u>Long-Term Surveillance and Maintenance (Remediation):</u> Increase due to inclusion of additional licensed Title I sites and acceptance of Title II sites into LTSM program.	\$+128
<u>Uranium Leasing:</u> Increase due to anticipated reclamation work at uranium leasing sites.	<u>\$+1,106</u>
Total Funding Change, Albuquerque	<u>\$-11,405</u>

SITE CLOSURE - NON-DEFENSE

OAK RIDGE

I. Mission Supporting Goals and Objectives

MISSION

The Oak Ridge Operations Office directs and manages about one million cubic yards of waste at the 226 acre Weldon Spring Site Remedial Action Project (WSSRAP) in Missouri, a decommissioned uranium processing plant, as well as numerous vicinity properties that were contaminated by former uranium processing operations.

2006 STRATEGY

The environmental restoration activities at WSSRAP will be completed before 2006. All contaminated material will be placed in an on-site facility for long term disposal. Long term surveillance and monitoring for the disposal facility will be conducted after project completion and the remaining land will be released for unrestricted use.

FY 1999 PROGRAM

In FY 1999 the WSSRAP will continue with remedial actions and complete the cleanup of two release sites and facilities for a cumulative total of 10 of 27 release sites including the treatment of 300,000 cubic yards of waste pit material and over 50 percent of waste (greater than 700,000 yds) placed in the on-site disposal facility. A total of 6 assessments will be completed for a cumulative total of 27 of 27 assessments, marking the completion of assessment activity for all release sites and facilities.

COMPLIANCE DRIVERS

Remediation activities at WSSRAP are governed under NEPA and a FFA under CERCLA with the EPA Region VII. Wastes at WSSRAP are also governed under TSCA, RCRA and the Federal Facility Compliance Act (FFCA) and other State and local requirements. The regulatory agreements with stakeholders contain milestones for regulatory compliance, which are flexible to allow for modification to meet regulatory requirements.

SITE CLOSURE - NON-DEFENSE - OAK RIDGE (cont'd)

II. Funding Schedule:

<u>Program Activity</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>	<u>\$ Change</u>	<u>% Change</u>
Remedial Action/Release Sites	<u>\$63,689</u> a/	<u>\$65,800</u>	<u>\$65,000</u>	<u>\$ -800</u>	<u>-1%</u>
TOTAL, Oak Ridge	<u>\$63,689</u>	<u>\$65,800</u>	<u>\$65,000</u>	<u>\$-800</u>	<u>-1%</u>

a/ \$1,303k was reprogrammed to the UE D&D Fund in FY 1997.

SITE CLOSURE - NON-DEFENSE - OAK RIDGE (cont'd)

III. Performance Summary - Accomplishments:

[PBS Numbers are Bracketed in the Text]

FY 1997

FY 1998

FY 1999

Remedial Action/Release Sites

Carry out activities at the Weldon Spring Disposal Facility: Weldon Spring Activities are fully funded by the Non-Defense Appropriation. [OR-47201]

\$37,734

\$55,324

\$48,896

- In FY 1997:

- Continued the operation of the Temporary Storage Area (TSA), Materials Storage Area (MSA), quarry water treatment plant and site water treatment plant.
- Began the operation of the soil borrow area.
- Initiated the design for the remediation of vicinity properties.
- Completed the removal of the chemical plant building foundations and associated contaminated soil.
- Completed the support facilities and initial subgrading for the disposal facility.
- Initiated the construction of the disposal facility.
- Continued the efforts on the preparation of the Quarry Residuals RI/FS and the ground water RI/FS.
- \$1,303 was reprogrammed to the D&D Fund.

- In FY 1998:

- Continue the operation of the TSA, MSA, quarry water treatment plant and site water treatment plant.
- Continue work on the Quarry Residuals FS.
- Complete the ground water ROD.
- Continue construction (completing 50 percent) and initiate waste placement at the disposal facility with associated operation of the soil borrow area.
- Complete the remediation of all remaining vicinity properties except Busch Lakes 34 & 35.

SITE CLOSURE - NON-DEFENSE - OAK RIDGE (cont'd)

III. Performance Summary - Accomplishments: (cont'd)

FY 1997

FY 1998

FY 1999

Remedial Action/Release Sites (cont'd)

Carry out activities at the Weldon Spring Disposal Facility (cont'd)

- In FY 1999:
 - Continue the operation of the TSA, MSA, quarry water treatment plant and site water treatment plant.
 - Complete the Quarry Residuals ROD.
 - Continue construction and accelerate waste placement of 300,000 cubic yards of treated product in the on-site disposal facility with associated operation of the soil borrow area.
 - Complete the remediation of Busch Lakes 34 & 35.

Carry out activities at the Weldon Spring Waste Treatment: Weldon Spring Activities are fully funded by the Non-Defense Appropriation. [OR-47202]

\$25,955

\$10,476

\$16,104

- In FY 1997:
 - Completed the design of the full-scale Chemical Stabilization and Solidification (CSS) plant; procured the process modules and started the on-site assembly.
 - Continued the sludge consolidation with the completion of the dredging from Pit 1 to Pit 3 and from Pit 2 to Pit 3; used Pits 1, 2 and 3 in a biodegradation effort to reduce the nitrates in the sludge to be treated in the CSS plant.
 - Initiated construction of the CSS plant.
 - Produced a high capacity dredge system for the removal of the sludge from Pit 3 to the CSS during its production run.

SITE CLOSURE - NON-DEFENSE - OAK RIDGE (cont'd)

III. Performance Summary - Accomplishments: (cont'd)

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Remedial Action/Release Sites</u> (cont'd)			
Carry out activities at the Weldon Spring Waste Treatment (cont'd)			
• In FY 1998:			
- Complete the construction of the full-scale CSS plant and begin operational testing.			
- Receive and performance test the sludge dredging system for Pit 3.			
• In FY 1999:			
- Accelerate removal of the raffinate pit sludges from Pits 3 and 4, treat in the CSS full-scale plant and place the resulting product in the disposal facility.			
- Initiate characterization of the raffinate pit liners and subsoils.			
- Initiate the design for the raffinate pits restoration.			
Subtotal, Remedial Action/Release Sites	<u>\$63,689</u>	<u>\$65,800</u>	<u>\$65,000</u>
TOTAL, OAK RIDGE	<u>\$63,689</u>	<u>\$65,800</u>	<u>\$65,000</u>

Explanation of Funding Changes from FY 1998 to FY 1999:

<u>Remedial Action/Release Sites:</u> Net decrease due to the Weldon Spring disposal facility remediation completions at Busch Lakes 34 and 35 and completion of quarry residual ROD; increase at the Weldon Spring Waste Treatment Plant due to sludge removal acceleration.	<u>\$-800</u>
Total Funding Change, Oak Ridge	<u>\$-800</u>

SITE CLOSURE - NON-DEFENSE

OHIO

I. Mission Supporting Goals and Objectives:

MISSION

The Environmental Management (EM) Program managed through the Ohio Field Office supports activities at three sites in two states. Sites include: the Columbus Environmental Management Project (CEMP) and the Miamisburg Environmental Management Project (MEMP) in the State of Ohio, and the West Valley Demonstration Project (WVDP) in the State of New York.

2006 STRATEGY

The strategy for all Ohio Field Office sites is to produce an environmentally restored end state by 2005 which serves the community's needs. The MEMP site will be transferred to the City of Miamisburg, the CEMP site will be returned to Battelle Laboratories, both for unrestricted use, and WVDP will be returned to the State of New York by the end of 2006.

However, there are several challenges that could delay the WVDP project completion beyond FY 2006. These challenges are: (1) the need to initiate an action plan to develop, implement and secure funding for the HLW and TRU cask development programs; (2) the need to develop an action plan to research potential storage and/or disposal sites(s) for TRU waste; (3) the need to develop an agreement with the sovereign nations, states, counties, and local municipalities affected through the shipping corridor for HLW and TRU waste; (4) the need to gain approval of the interim host location for the HLW and TRU waste; and (5) secure funding for the transportation of the HLW and TRU waste.

FY 1999 PROGRAM

The CEMP is comprised of two sites (West Jefferson and King Avenue) located in Columbus, Ohio. Research and development work was performed at its facilities for the Department and its predecessors. The buildings are privately owned by Battelle and the facility retains an active Nuclear Regulatory Commission license for possession of special nuclear material. Both sites are radioactively-contaminated and funded through both the Defense and Non-Defense accounts. The

CEMP is comprised of

SITE CLOSURE - NON-DEFENSE - OHIO (cont'd)

I. Mission Supporting Goals and Objectives: (cont'd)

FY 1999 PROGRAM (cont'd)

17 facilities, of which 11 were completed by the end of FY 1996. Two additional completions are scheduled for FY 1998. The King Avenue site will be completed in FY 1998 and returned to the private owner. Restoration activities will continue at West Jefferson in FY 1999. Decontamination activities will be initiated in FY 1998 and should be completed by FY 2005 at the West Jefferson site, at which time it will be returned to the private owner. All activities at CEMP are in compliance with NRC and all regulatory requirements.

The MEMP manages the Mound Plant which is located on 306 acres in Miamisburg, Ohio ten miles south of Dayton. The Mound Plant was built in the late 1940's to support research and development, testing and production activities for the Department's defense nuclear weapons complex and energy research programs. This mission continued until 1994, at which time these activities were transferred to other DOE sites. The Mound Plant was primarily involved with components containing plutonium-238, polonium-210 and tritium and processed large quantities of various types of explosives. As a result of these operations, the buildings, soil, and groundwater are contaminated with radioactive and hazardous chemicals. The plant has been placed on the National Priority List and a Federal Facility Agreement to effect remediation of the site has been negotiated with the Ohio and U.S. Environmental Protection Agencies. The cleanup of the buildings and soil and eventual disposition of the real property at the Mound Plant will be complete by the year 2005 or earlier. The Mound Plant cleanup is predominantly funded through the Defense Environmental Management account but also receives some funding from the Non-Defense account. The only Non-Defense environmental remediation currently being conducted at the Mound Plant is the decontamination of areas within the Semi-Works Cave caused by radionuclide recovery activities and is scheduled to be completed by FY 2003.

The West Valley Demonstration Project (WVDP) is located at the Western New York Nuclear Service Center near West Valley, New York. The Center was developed by a private company with government support to process commercial spent nuclear fuel (SNF) to extract plutonium and uranium. It operated from 1966 to 1972.

The West Valley Demonstration Project includes all the activities undertaken in carrying out HLW solidification, including: (1) preparation of the Western New York Service Center's premises and facilities to accommodate the solidification project, including decontamination of existing facilities and equipment; (2) removal of the waste from underground storage tanks; (3)

development, design, construction, and operations of systems and necessary supporting facilities for the solidification of waste;

SITE CLOSURE - NON-DEFENSE - OHIO (cont'd)

I. Mission Supporting Goals and Objectives: (cont'd)

FY 1999 PROGRAM (cont'd)

(4) acquisition of containers for permanent disposal of the solidified waste; (5) temporary storage of the solidified waste followed by transportation to an appropriate Federal repository for permanent disposal; (6) decontamination and decommissioning (D&D) of the waste tanks and facilities, material and hardware used in carrying out the solidification of the wastes; and (7) disposal of low level and transuranic and wastes produced from project activities.

The principal operation at West Valley is currently the solidification of approximately 2,200 cubic meters of liquid HLW into borosilicate glass using vitrification. The primary vitrification campaign began in June 1966 and will be completed in late FY 1998, followed by vitrification of the HLW tank heels, which will continue through FY 2001.

In preparation for initiating the vitrification program, the entire inventory of liquid HLW was pretreated between 1988 and 1995. This processing produced 20,000 drums containing LLW liquid stabilized in cement. These drums are being temporarily stored on-site pending a decision on permanent disposal relative to the Record of Decision (ROD) for project completion.

Solidification of the liquid HLW into borosilicate glass to produce a durable solid waste form for permanent disposal began in

FY 1996 and steady state operation will continue through the third quarter of FY 1998, when the primary campaign to process liquid HLW is scheduled to be completed. Continuation of HLW tank heel and residual high activity waste processing will begin in the fourth quarter of FY 1998 and is scheduled to be completed by the end of the fourth quarter of FY 2001. The emphasis on this continuation of vitrification operations is to ensure maximum utilization of the melter design life.

Following the vitrification of the HLW, the buildings and other facilities will be decontaminated and decommissioned (D&D), based on the results of an Environmental Impact Statement (EIS) and Record of Decision (ROD) for the completion of the project. This phase of the cleanup project is expected to begin in late FY 2000. The estimated cost from FY 1997 through FY 2006 for the WVDP is approximately \$1.4 billion. This estimate will be refined after the EIS ROD is published.

Another critical element of the EM program at West Valley is the safe management of 125 spent nuclear fuel elements (SNF) which are stored at the site. EM will continue surveillance and maintenance of the spent fuel facility to ensure safe storage until the fuel can be shipped to the Idaho National Engineering and Environmental Laboratory (currently planned for 2001).

SITE CLOSURE - NON-DEFENSE - OHIO (cont'd)

I. Mission Supporting Goals and Objectives: (cont'd)

FY 1999 PROGRAM (cont'd)

The FY 1999 budget request is based on the cost estimates that have been prepared to support the accelerated closure of the site pursuant to the Draft 2006 Plan. Completion of the WVDP will require the removal of the HLW canisters and TRU waste resulting from project facilities; disposal of LLW in accordance with current laws, the Stipulation of Compromise Settlement, and the EIS ROD; and disposition of remaining Project responsibilities. The accelerated path for site closure by 2006 requires the early identification and selection of sites to receive shipments of HLW, TRU, and SNF from the WVDP, as well as the packaging, transportation, licensing, subsequent storage, and funding requirements associated with such shipments. Achieving site closure by 2006 will depend on the Department's ability to implement the decisions made in the EIS ROD--which is currently scheduled to be issued in FY 2000--by 2006 with the funding available during that period. These uncertainties are reflected in the Draft 2006 Plan.

The New York State Energy Research and Development Authority and DOE are working together and with stakeholders, including the Citizens' Task Force, to formulate a preferred alternative for Project completion and closure or long-term management of the site. Selection of a preferred alternative and subsequent ROD will determine final disposition of the wastes.

Due to the rigor of the stakeholder and public involvement in the Environmental Impact Statement (EIS) and ROD process, the ROD is now scheduled for issuance in May 2000. Because of the uncertainties before and after this decision process, it is possible that completion date for the WVDP may slip beyond FY 2006. Each year beyond FY 2006, the project is extended is forecasted to cost \$150M. Work to support vitrification and tank heel high activity waste processing has not and will not be affected by the shift in the EIS schedule. Project completion work that is independent of the EIS is continuing uninterrupted. The near term impact to the overall WVDP cost and schedule is minimal. Until a preferred alternative (PA) and ROD is issued, a detailed cost and schedule estimate is developed, and a baseline is approved for the PA/ROD, the long-range cost and schedule is unknown.

Several challenges could further delay the Project Completion beyond FY 2006. These challenges are: (1) the need to initiate an action plan to develop, implement and secure funding for the HLW and TRU cask development programs; (2) the need to develop an action plan to research potential storage and/or disposal site(s) for TRU waste; (3) the need to develop an

agreement

SITE CLOSURE - NON-DEFENSE - OHIO (cont'd)

I. Mission Supporting Goals and Objectives: (cont'd)

FY 1999 PROGRAM (cont'd)

with the sovereign nations, states, counties, and local municipalities affected through the shipping corridor for HLW and TRU wastes; (4) the need to gain approval of the interim host location for the HLW and TRU waste; and (5) secure funding for the transportation of the HLW and TRU waste.

II. Funding Schedule:

<u>Program Activity</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>	<u>\$ Change</u>	<u>% Change</u>
Facility Decommissioning	\$ 852	\$ 3,330	\$ 4,886	+1,556	+47%
High Level Waste	74,482	70,085	67,400	-2,685	-4%
Mixed Low-Level	97	284	0	-284	-100%
Low-Level Waste	1,444	1,791	1,465	-326	-18%
Spent Nuclear Fuel Stabilization	768	2,171	2,800	+629	+29%
Landlord	16,000	17,670	18,054	+384	+2%
Program Support	<u>28,111</u>	<u>27,666</u>	<u>25,030</u>	<u>-2,636</u>	<u>-10%</u>
TOTAL, Ohio	<u>\$121,754</u>	<u>\$122,997</u>	<u>\$119,635</u>	<u>\$-3,362</u>	<u>-3%</u>

III. Performance Summary - Accomplishments:

[PBS Numbers are Bracketed in the Text]

Facility Decommissioning

FY 1997 **FY 1998** **FY 1999**

Facility Decommissioning at Columbus will include the decontamination of buildings at the King Avenue, and West Jefferson sites. Specifically, the Hot Cell area from the retired reactor research facility at West Jefferson, will require quality assurance, waste

SITE CLOSURE - NON-DEFENSE - OHIO (cont'd)

III. Performance Summary - Accomplishments: (cont'd)

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Facility Decommissioning</u> (cont'd)			
management, and health and safety support during the decommissioning process. Upon completion, building and grounds will be returned to Columbus for reuse without radiological restriction.			
Conduct decontamination activities at CEMP. [OH-CL-01, OH-CL-02]	\$852	\$3,330	\$4,886
<ul style="list-style-type: none">• In FY 1997, continued decontamination activities at the King Avenue buildings, included health and safety support, emergency preparedness, site services, public relations, quality assurance, waste management, and project management activities; completed annual performance measures.• In FY 1998, complete fieldwork decontamination at the King Avenue Site; continue decontamination activities at the West Jefferson Buildings, including material and equipment removal and activities, health and safety support, emergency preparedness, site services, public relations, quality assurance, waste management, and project management activities; complete annual performance measures.• In FY 1999, continue equipment and material removal from the hot cell building and initiate equipment and material removal from the retired reactor research facility at West Jefferson; continue health and safety support, emergency preparedness, site services, public relations, quality assurance, waste management, and project management activities.			
Assessments			
<ul style="list-style-type: none">• In FY 1997, 0 assessments were completed.• In FY 1998, 2 assessments will be completed.• In FY 1999, 0 assessments will be completed.			

III. Performance Summary - Accomplishments: (cont'd)

High-Level Waste [OH-WV-01; OH-WV-02]

SITE CLOSURE - NON-DEFENSE - OHIO (cont'd)

III. Performance Summary - Accomplishments: (cont'd)

FY 1997

FY 1998

FY 1999

High-Level Waste (cont'd)

- In FY 1997: (cont'd)
 - Continued Citizen's Task Force efforts related to development of an EIS Preferred Alternative.
- In FY 1998:
 - Continue operation of vitrification facility.
 - Produce approximately 88 canisters of HLW.
 - Complete primary vitrification campaign by third quarter.
 - Initiate processing of HLW tank heels; continue to safely store HLW canisters.
 - Resolve responsibility issues with NYSERDA.
 - Complete Citizen's Task Force input for developing a preferred alternative in the EIS.
- In FY 1999:
 - Continue operation of vitrification facility to treat approximately 108 m³ of HLW tank heels reducing the remaining inventory to 216 m³ and resulting in production of approximately 15 to 35 canisters of HLW.
 - Operate tank farm in support of vitrification.
 - Continue to safely store HLW canisters.
 - Obtain NRC approval of the general D&D criteria based on the SEIS.
 - Develop criteria/campaigns/strategies for completion of vitrification and cutoff of tanks and facilities used for vitrification.
 - Continue environmental monitoring.
 - Operate site safety and compliantly.
 - Issue Supplemental Draft EIS for public review.

SITE CLOSURE - NON-DEFENSE - OHIO (cont'd)

III. Performance Summary - Accomplishments: (cont'd)

High-Level Waste (cont'd)

Treatment (at West Valley)

- In FY 1997, 1,038 cubic meters of HLW were treated.
- In FY 1998, 638 cubic meters of HLW will be treated.
- In FY 1999, 108 cubic meters of HLW will be treated.

Storage (at West Valley)

- In FY 1997, 962 cubic meters of HLW were stored.
- In FY 1998, 324 cubic meters of HLW will be stored.
- In FY 1999, 216 cubic meters of HLW will be stored.

Disposal (at West Valley)

- In FY 1997, 118 cubic meters of HLW were made disposal-ready.
- In FY 1998, 74 cubic meters of HLW will be made disposal-ready.
- In FY 1999, 13 cubic meters of HLW will be made disposed-ready.

Subtotal, High-Level Waste

FY 1997

FY 1998

FY 1999

\$74,482

\$70,085

\$67,400

Mixed Low-Level Waste [OH-CL-01, OH-CL-02]

The relatively small amounts of mixed low-level wastes at West Valley are safely stored through FY 1999. Funding for WV MLLW is included with HLW.

SITE CLOSURE - NON-DEFENSE - OHIO (cont'd)

III. Performance Summary - Accomplishments: (cont'd)

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Mixed Low-Level Waste</u> (cont'd)			
Support disposition of waste materials at Columbus Environmental Management Project (CEMP)	\$97	\$284	\$0
<ul style="list-style-type: none"> • In FY 1997, continued disposal of radioactive mixed waste off-site. • In FY 1998, conduct waste segregation, sorting, and packaging of waste materials, and continue a limited number of waste shipments off-site. • In FY 1999, continue segregation, sorting, and disposal of MLLW shipments off-site, using carryover balances from FY 1998. 			
Treatment (at West Valley)			
<ul style="list-style-type: none"> • In FY 1997, one cubic meter of mixed low-level waste was treated. • In FY 1998, 0 cubic meters of mixed low-level waste will be treated. • In FY 1999, 0 cubic meters of mixed low-level waste will be treated. 			
Disposal (at West Valley)			
<ul style="list-style-type: none"> • In FY 1997, four cubic meters of mixed low-level waste were disposed. • In FY 1998, 0 cubic meters of mixed low-level waste will be disposed. • In FY 1999, 0 cubic meters of mixed low-level waste will be disposed. 			
Storage (at West Valley)			
<ul style="list-style-type: none"> • In FY 1997, 195 cubic meters of mixed low-level waste were stored. • In FY 1998, 208 cubic meters of mixed low-level waste will be stored. • In FY 1999, 221 cubic meters of mixed low-level waste will be stored. 			
Subtotal, Mixed Low-Level Waste	\$97	\$284	\$0

SITE CLOSURE - NON-DEFENSE - OHIO (cont'd)

III. Performance Summary - Accomplishments: (cont'd)

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Low-Level Waste</u> [OH-CL-01, OH-CL-02; OH-MB-04]			
<p>The low-level wastes at West Valley are safely stored pending disposition in accordance with the future EIS Record of Decision. Small amounts of low-level wastes are shipped off-site for disposal. Funding for WV LLW is included with HLW.</p> <ul style="list-style-type: none"> • In FY 1997, continued safe storage of low-level wastes and initiated off-site LLW shipments • In FY 1998, continue safe storage of low-level wastes and continue off-site LLW shipments • In FY 1999, continue safe storage of low-level wastes. 			
Support disposition of waste materials at Columbus Environmental Management Project (CEMP).	\$446	\$799	\$462
<ul style="list-style-type: none"> • In FY 1997, continued disposal of radioactive low level waste off-site and initiated TRU waste planning and development leading to the first TRU waste shipment off-site. • In FY 1998, conduct waste segregation, sorting and packaging of waste materials, and continue LLW waste shipments off-site. • In FY 1999, continue segregation, sorting, packaging, and disposal of LLW waste and shipments off-site. 			
Provides for remediation of areas within the Semi-Works Cave at Mound.	\$998	\$992	\$1,003
<ul style="list-style-type: none"> • In FY 1997, performed decontamination activities. • In FY 1998, continue decontamination activities. • In FY 1999, continue decontamination activities. 			

SITE CLOSURE - NON-DEFENSE - OHIO (cont'd)

III. Performance Summary - Accomplishments: (cont'd)

Low-Level Waste (cont'd)

FY 1997 **FY 1998** **FY 1999**

Storage (West Valley)

- In FY 1997, 15,943 cubic meters of low-level waste were stored.
- In FY 1998, 16,223 cubic meters of low-level waste will be stored.
- In FY 1999, 16,653 cubic meters of low-level waste will be stored.

Disposal (West Valley)

- In FY 1997, 140 cubic meters of low-level waste were disposed.
- In FY 1998, 150 cubic meters of low-level waste will be disposed.
- In FY 1999, 0 cubic meters of low-level waste will be disposed.

Subtotal, Low-Level Waste

\$1,444

\$1,791

\$1,465

Transuranic Waste

Transuranic Wastes at West Valley are safely stored on an interim basis pending a decision by DOE for a receiver site to accept Non-Defense TRU Waste. Funding for WVDP TRU Waste is included with HLW.

\$0

\$0

\$0

Storage - (at West Valley)

- In FY 1997, 521 cubic meters of TRU waste were stored.
- In FY 1998, 525 cubic meters of TRU waste will be stored.
- In FY 1999, 529 cubic meters of TRU waste will be stored.

Subtotal, Transuranic Waste

\$0

\$0

\$0

SITE CLOSURE - NON-DEFENSE - OHIO (cont'd)

III. Performance Summary - Accomplishments: (cont'd)

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Spent Nuclear Fuel Stabilization</u> [OH-WV-03]			
The Fuel Receiving and Storage (FRS) facility at West Valley contains 125 irradiated commercial spent nuclear fuel elements that must be transferred off-site during calendar year 2001 (per agreement with the State of Idaho and the State of New York).	\$768	\$2,171	\$2,800
<ul style="list-style-type: none"> • In FY 1997, provided surveillance and maintenance for the FRS facility to ensure continued safe storage of the fuel elements while preparing for transfer to Idaho. • In FY 1998, continue FRS facility surveillance and maintenance; prepare and submit shipping cask recertification applications to the Nuclear Regulatory Commission; and prepare equipment at the West Valley facility for future shipments. • In FY 1999, continue FRS facility surveillance and maintenance and complete preparation of the West Valley equipment and procedures and initiate the assessment of operational readiness. 			
Spent Nuclear Fuel Stabilized			
<ul style="list-style-type: none"> • In FY 1997, 27 Metric Tons Heavy Metal (MTHM) were stabilized. • In FY 1998, 27 MTHM will be stabilized. • In FY 1999, 27 MTHM will be stabilized. 			
Make Disposition-Ready			
<ul style="list-style-type: none"> • In FY 1997, 11.34 cubic meters were disposition-ready. • In FY 1998, 11.34 cubic meters will be disposition-ready. • In FY 1999, 11.34 cubic meters will be disposition-ready. 			
Subtotal, Spent Nuclear Fuel Stabilization	\$768	\$2,171	\$2,800

SITE CLOSURE - NON-DEFENSE - OHIO (cont'd)

III. Performance Summary - Accomplishments: (cont'd)

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Landlord</u>			
Landlord Site-Wide Infrastructure: [OH-WV-04]			
Support for the West Valley Demonstration Project including basic facilities, equipment, installations, and related services essential for occupation and operation of the site. This includes roads, utilities, environmental monitoring, analytical laboratories, safeguards and security, offices, warehouses, corrective maintenance, preventive maintenance, etc.	\$15,000	\$16,000	\$16,000
Provide for S&M activities at the West Jefferson North Site at CEMP. [OH-CL-03]			
• In FY 1997, provided required core environmental S&M activities, including facility structural/hazard analysis of major building systems.			
• In FY 1998, provide required core environmental S&M activities, including facility structural/hazard analysis of major building systems.			
• In FY 1999, conduct formal pre-D&D surveillance and maintenance program including building system repairs/upgrades to assure radiological control; continue facility structural/hazard analysis of major buildings systems.	\$1,000	\$1,670	\$2,054
Subtotal, Landlord	\$16,000	\$17,670	\$18,054

Program Support

Support for the West Valley Demonstration Project including technical support and contract expertise in evaluating waste management activities. It includes activities related to strategic planning, information activities, and field management. Also included are preparation of project baseline summaries, risk data sheet documentation, integrated

SITE CLOSURE - NON-DEFENSE - OHIO (cont'd)

III. Performance Summary - Accomplishments: (cont'd)

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Program Support</u> (cont'd)			
priority lists, site-wide technical baselines, facility plans, system engineering, and complex-wide plans. [OH-WV-04]	\$28,111	\$26,000	\$23,900
Provide program management support, including public affairs, regulatory compliance, quality assurance, project management in completion of procurement of electronic data management system at CEMP. [OH-CL-03]	\$0	\$1,666	\$1,130
Subtotal, Program Support	<u>\$28,111</u>	<u>\$27,666</u>	<u>\$25,030</u>
TOTAL, OHIO	<u>\$121,754</u>	<u>\$122,997</u>	<u>\$119,635</u>

Explanation of Funding Changes From FY 1998 to FY 1999:

Facilities Decommissioning: Increase in FY 1999 at West Jefferson Site to initiate TRU chemical cleaning process from the retired reactor research facility, including equipment and material removal. \$+1,556

Waste Activities: Decrease is due, in part, to less vitrification process chemicals being required at West Valley and less spare equipment being procured for on-hand availability in case of process equipment failure. \$-3,295

Spent Nuclear Fuel Stabilization: The increase in Spent Nuclear Fuel (SNF) Stabilization/Surveillance and Maintenance funding is attributed to the initiation of an operational readiness assessment and completion of equipment and procedure modifications at the West Valley, NY facility. The additional activities prepare for shipment of 125 fuel elements to the Idaho National Engineering and Environmental Laboratory. \$+629

Landlord: Landlord activities at West Valley are essentially unchanged as project continues with vitrification processing of HLW tank heels/residuals.

\$+384

SITE CLOSURE - NON-DEFENSE - OHIO (cont'd)

Explanation of Funding Changes From FY 1998 to FY 1999: (cont'd)

Program Support: Decrease due to completion of procurement of electronic data management system, continued headcount reduction, enhanced productivity through automating processes, and re-engineering efforts. \$-2,636

Total Funding Change, Ohio \$-3,362

DEPARTMENT OF ENERGY
FY 1999 CONGRESSIONAL BUDGET REQUEST
(Changes from FY 1999 OMB Budget Request are denoted with a vertical line in left margin.)

NON-DEFENSE ENVIRONMENTAL MANAGEMENT
(Tabular dollars in thousands. Narrative material in whole dollars.)

SITE CLOSURE

1. Title and Location of Project:		West Valley Demonstration Project,
2a.	Project No.:	West Valley, New York
2b.	Operating Funded	

SIGNIFICANT CHANGES

- o No significant changes.

DEPARTMENT OF ENERGY
 FY 1999 CONGRESSIONAL BUDGET REQUEST
 (Changes from FY 1999 OMB Budget Request are denoted with a vertical line in left margin.)

NON-DEFENSE ENVIRONMENTAL MANAGEMENT
 (Tabular dollars in thousands. Narrative material in whole dollars.)

SITE CLOSURE

1. Title and Location of Project:		West Valley Demonstration Project,	
2a.	Project No.:	West Valley, New York	
2b.	Operating Funded		
3a. Date A-E Work Initiated, (Title I Design Start Scheduled):		1st Qtr. FY 1982	
5.	Previous--construction cost	estimate: N/A	
3b. A-E Work (Titles I & II) Duration: 1st Qtr. FY 1990		Total Project Cost: N/A	
		New York State	
		<u>+ DOE Share</u>	
4a. Date Physical Construction Starts: 2nd Qtr. FY 1984	6. Project Cost:	\$2,732,165	<u>DOE Share</u> \$2,455,070
4b. Project Completion Date: 4th Qtr. FY 2006			

1. Title and Location of Project:	West Valley Demonstration Project,
2a. Project No.:	West Valley, New York
2b. Operating Funded	

7. Financial schedule (Federal Funds): a/

<u>Fiscal Year</u>	<u>Appropriation</u>	<u>Adjustments</u>	<u>Obligations</u>	<u>Costs</u>
Previous	\$ 773,510 <u>b/</u>		\$ 768,854	\$ 728,334
1994	124,000	- 3,654 <u>c/</u>	120,346	131,400
1995	127,247	- 2,524 <u>d/</u>	124,723	134,680
1996	119,389	- 4,100 <u>e/</u>	115,289	125,400
1997	117,593	-676 <u>f/</u>	116,917	116,917
1998	113,201	-1,116 <u>g/</u>	112,085	112,085
1999	107,300		107,300	107,300
2000	129,700		129,700	129,700
2001	133,200		133,200	133,200
2002-2006	722,000		726,656	736,054

a/ It should be noted that this project is justified as an operating expense funded construction project. It has been reformatted only to comply with the revised DOE Order 5100.3. It is not intended to be funded as a capital line-item.

b/ Reflects a reduction of \$1,574,000 as a general reduction mandated by Congress in the FY 1993 Appropriation language and a reduction of \$4,000,000 due to use of prior year balances per FY 1994 Appropriation.

c/ Reflects rescission of \$3,654,000 for FY 1994.

d/ Reflects reduction of \$2,524,000 General Reduction.

e/ Reflects reduction of \$4,000,000 due to use of prior year balances and a \$100,000 Non-Defense rescission.

f/ Reflects reduction of prior year uncoded as part of FY 1997 Appropriation.

g/ Reflects reduction of \$1,115,958 General Reduction.

1. Title and Location of Project:	West Valley Demonstration Project,
2a. Project No.:	West Valley, New York
2b. Operating Funded	

8. Project Description, Justification and Scope

On October 1, 1980, Public Law 96-368, the West Valley Demonstration Project Act (WVDP Act) went into effect. This Act directed the Secretary of Energy to carry out a high-level radioactive waste management demonstration project at the Western New York Nuclear Service Center (WNYNSC) located in Cattaraugus County, near West Valley, New York. The WNYNSC is owned by the State of New York and is administered by the New York State Energy Research and Development Authority (NYSERDA).

The WNYNSC reprocessed nuclear fuel from 1966 to 1972. During that time, approximately 660,000 gallons of alkaline high-level waste was generated by this activity and stored in a carbon steel tank located in an underground vault. The project scope includes all activities undertaken in carrying out the solidification, including: (1) preparation of the Center's premises and facilities to accommodate the solidification project, including such decontamination of existing facilities and equipment as may be necessary or appropriate; (2) removal of the wastes from the underground storage tanks; (3) development, design, construction, and operation of systems and necessary supporting facilities for the solidification of the wastes; (4) acquisition of containers for the permanent disposal of the solidified waste; (5) temporary storage of the solidified waste followed by transportation to an appropriate Federal repository for permanent disposal; (6) decontamination and decommissioning (D&D) of the waste tanks and facilities, material and hardware used in carrying out the solidification of the wastes; and (7) disposal of low-level and transuranic wastes produced from project activities.

In preparation for initiating the vitrification program, the entire inventory of liquid HLW was pretreated between 1988 and 1995. This processing produced 20,000 drums containing LLW liquid stabilized in cement. These drums are being temporarily stored on site pending a decision on permanent disposal relative to the ROD for project completion.

Solidification of the liquid HLW into borosilicate glass to produce a durable solid waste form for permanent disposal began in FY 1996 and steady state operation will continue through 3Q FY 1998, when the primary campaign to process Liquid HLW is scheduled to be completed. Continuation of HLW tank heel and residual high activity waste processing will begin in 4th Qtr. FY 1998 and is scheduled to be completed by the end of 4Q FY 2001. The emphasis on this continuum of vitrification operations is to ensure maximum utilization of the melter design life.

1. Title and Location of Project:	West Valley Demonstration Project,
2a. Project No.:	West Valley, New York
2b. Operating Funded	

8. Project Description, Justification and Scope (cont'd)

The West Valley Demonstration Project scope includes all the activities undertaken in carrying out HLW solidification, including: (1) preparation of the Western New York Service Center's premises and facilities to accommodate the solidification project, including such decontamination of existing facilities and equipment as may be necessary or may be appropriate; (2) removal of the waste from underground storage tanks; (3) development, design, construction, and operations of systems and necessary supporting facilities for the solidified waste; (4) acquisition of containers for the permanent disposal of the solidified waste; (5) temporary storage of the solidified waste followed by the transportation to an appropriate Federal repository for permanent disposal; (6) decontamination and decommissioning (D&D) of the waste tanks and facilities, material and hardware used in carrying out the solidification of the waste; and (7) disposal of low-level and transuranic wastes produced from project activities.

In preparation for initiating the vitrification program, the entire inventory of liquid HLW was pretreated between 1988 and 1995. This processing produced 20,000 drums containing LLW liquid stabilized in cement. These drums are being temporarily stored on-site pending a decision on permanent disposal relative to the Record of Decision (ROD) for project completion.

Solidification of the liquid HLW into borosilicate glass to produce a durable solid waste form for permanent disposal began in FY 1996 and steady state operation will continue through 3rd Qtr. FY 1998, when the primary campaign to process liquid HLW is scheduled to be completed. Continuation of HLW tank heel and residual high activity waste processing will begin in 4th Qtr. FY 1998 and is scheduled to be completed by the end of 4th Qtr. FY 2001. Continuation of vitrification operations is essential to ensure maximum utilization of the melter over its design life.

The WVDP scope encompasses activities required for removal of HLW canisters and TRU waste from project facilities, disposal of LLW in accordance with the Act and Stipulation of Compromise as directed by the final Environmental Impact Statement (EIS) ROD, and disposition of remaining project responsibilities. The FY 1999 and out year budget requests are based on the cost estimates that support a clear accelerated path forward for project completion. The New York State Energy Research and Development Authority and DOE are working together to formulate a preferred alternative for Project completion and closure or long-term management of the site with stakeholder input, including recommendations from the

1.	Title and Location of Project:	West Valley Demonstration Project,
2a.	Project No.:	West Valley, New York
2b.	Operating Funded	

| Citizen's Task Force (CTF). Selection of a preferred alternative and subsequent ROD will determine final disposition of the
| waste.
|

1. Title and Location of Project:	West Valley Demonstration Project,
2a. Project No.:	West Valley, New York
2b. Operating Funded	

8. Project Description, Justification and Scope (cont'd)

Due to the rigor of the Stakeholder and public involvement in the EIS and ROD process, the ROD is now scheduled for issuance in May 2000. The potential for slipping the Project Completion date of the WVDP beyond FY 2006 is substantially real. The forecasted budget request is approximately \$150 million to fund each additional fiscal year beyond FY 2006. Work to support Vitrification and tank-heel, high activity waste processing has not, and will not be impacted by the shift in the EIS schedule. Work relative to project completion, that can be completed independent of the EIS, is continuing uninterrupted. The near-term impact to the overall West Valley Demonstration Project (WVDP) cost and schedule is minimal. Until a preferred alternative (PA) and ROD is issued and a detailed cost and schedule estimate is developed and a baseline is approved for the PA/ROD, the long range cost and schedule is unknown/to be determined.

In addition, there are several challenges, that could further delay the project completion beyond FY 2006. These challenges are as follows: (1) initiate an action plan to develop, implement and secure funding for the HLW and TRU cask development programs; (2) develop an action plan to research potential storage and/or disposal site(s) for TRU waste; (3) develop an agreement with the sovereign nations, states, counties, and local municipalities affected through the shipping corridor for HLW and TRU waste; (4) approval of the interim host location for the HLW and TRU waste; and (5) secure funding for the transportation of the HLW and TRU waste.

The DOE-owned Commercial Spent Nuclear Fuel assembly shipment from WVDP to the Idaho National Engineering and Environmental Laboratory (INEEL), is not included in this budget request. The West Valley site is storing 125 spent fuel assemblies from previous reprocessing activities, which are scheduled to be shipped by the end of FY 2001. This activity is not part of the WVDP Act Public Law 96-368, however, it is necessary for project completion.

It should be noted that this project is justified as an operating expense funded Construction Line Item Project. Operating expense funds will be used to fund development, design, construction, site/facility operation, and decontamination and decommissioning activities associated with the project.

1. Title and Location of Project:	West Valley Demonstration Project,
2a. Project No.:	West Valley, New York
2b. Operating Funded	

9. Details of Cost Estimate

Conceptual estimates have been developed for the Project completion and closure options as part of the extensive documentation assembled for the DEIS. These estimates are considered to be scoping estimates useful for comparative analysis of the options being considered. The 2006 Plan delineates total project cost estimates (TPCE) based on the assumption's listed below. With the issuance of the Record of Decision (ROD) the 2006 Plan activities will be reviewed and appropriate changes incorporated as required to fulfill ROD implementation. An independent review of the 2006 Plan was performed by Logistics Management Institute. The summary conclusion of their report stated that "the technical approach to cleanup requirements is sound, actions taking place prior to the ROD are necessary and consistent to fulfilling the requirements of the Act, and the funding profiles appear adequate for the work scope identified, particularly for near-term activities." The type of project completion activities as directed by the EIS/ROD will determine the appropriate level of mission and general support costs.

Project completion at WVDP requires removal of HLW, TRU, and SNF and execution of scopes that will be defined in the Record of Decision (ROD) planned for May 2000. The Draft 2006 plan requires accelerated identification of receiver sites for the HLW, TRU, and SNF along with the appropriate casks/licensing/agreements and receiver site modifications (including funding) for shipment; however, the funding has not been identified. Achieving the Draft 2006 Plan completion is fully dependent on the May 2000 ROD scopes and whether they are executable within the fixed funding plan and the available time (FY 2001 thru FY 2006). These uncertainties are reflected in the Draft 2006 Plan with the highest programmatic risk assessments in the critical events analysis section, along with the assumption that the cost/schedule baseline will be reviewed and revised to adjust to the ROD and receiver site decisions.

1. Title and Location of Project:	West Valley Demonstration Project,
2a. Project No.:	West Valley, New York
2b. Operating Funded	

9. Details of Cost Estimate (cont'd)

Total Project Cost Estimate

Total Cost

(in thousands)

High-Level Waste Vitrification and Tank Heel and Residual High Activity Waste Processing	\$874,173
Site Transition, Decommissioning and Project Completion	772,924
Project Management and Site Support	<u>807,973</u>
Prior + 2006 Plan TPCE Total:	2,455,070

Non-DOE Cost (New York State Funding)	<u>277,095</u>
Total Project Cost	\$2,732,165

10. Method of Performance

Schedule of Planned Activities

<u>Activity</u>	<u>Start</u>	<u>Complete</u>
Primary Liquid HLW Vitrification Campaign	3rd Qtr. FY 1996	3rd Qtr. FY 1998
EIS for WVDP Completion and Site Closure	1st Qtr. FY 1989	1st Qtr. FY 2000
Implement ROD Activities Pertaining to WVDP Act	4th Qtr. FY 2000	4th Qtr. FY 2005
High-Level Waste Tank Heel and Residual Vitrification Campaign	4th Qtr. FY 1998	4th Qtr. FY 2001
Removal of High-Level Waste Canisters	3rd Qtr. FY 2002	4th Qtr. FY 2005
Transuranic Waste Shipments	2nd Qtr. FY 2004	2nd Qtr. FY 2005
Project Closeout	1st Qtr. FY 2003	4th Qtr. FY 2006

1. Title and Location of Project:	West Valley Demonstration Project,
2a. Project No.:	West Valley, New York
2b. Operating Funded	

10. Method of Performance (cont'd)

Management and Contracting

The project is managed for the Department by an onsite project office, reporting through the Ohio Field Office, which is responsible for the day-to-day management and decision making. An operating contractor, West Valley Nuclear Services Company, Inc. (a wholly owned subsidiary of Welco Corporation), with a performance based contract, is responsible for the technical management of the high-level waste solidification related activities, site and facility operations, and decontamination and decommissioning of facilities used during processing and project completion activities. Approval by the Department's Field, Project, and Headquarters Officers is required on matters affecting project policies and technical, cost and schedule baselines. The State of New York, through the New York State Energy Research and Development Authority, provides consultation and comment on project activities to the Department as required by the West Valley Demonstration Project Act and the cooperative agreement between the Department and the Authority. The Nuclear Regulatory Commission provides the Department with informal review and consultations with respect to any potential radiological danger to public health and safety that may be presented by the project. The DOE-West Valley is seeking the most effective and efficient methods to assist New York State in reaching decisions on project completion by DOE and site closure/long-term site management by New York State, who is the owner/landlord of the site. Efforts, coordinated by the Citizens Task Force, are in progress and involve all potentially affected parties and stakeholders (i.e., regulatory agencies, Native Americans -- The Seneca Nations of Indians, community organizations, special interest groups, and general public) to help ensure that the best, most inclusive information is available to the decision makers to develop recommendations for the ROD. Contracting will be by the Department or the operating contractor, depending on the nature and scope of work. Performance based contracting at the lower tier level will be utilized when appropriate. The project is supported by the Battelle Pacific Northwest National Laboratory, Richland, Washington, for development activities required to adopt waste treatment and solidification technology for the specific West Valley situation; and Science Applications International Corporation for development and review of the Environmental Impact Statement for completion of the West Valley Demonstration Project.

1. Title and Location of Project:	West Valley Demonstration Project,
2a. Project No.:	West Valley, New York
2b. Operating Funded	

10. Method of Performance (cont'd)

Prior Year Achievements (FY 1997)

Continued steady state processing of liquid HLW throughout FY 1997 producing 122 canisters of HLW. Continued safe storage of solidified HLW canisters as they were produced. Worked towards the development of a preferred alternative for the EIS. Worked in conjunction with NRC and NYSERDA to develop D&D criteria that will be used in planning and implementing ROD activities. Project management and site support activities conducted at an appropriate level for safe site operations.

Current Year Achievements (FY 1998)

Continue steady state HLW liquid processing through 3rd Qtr. FY 1998, completing the primary vitrification campaign. Continue safe storage of solidified HLW canisters as they are produced. Modify process systems and begin vitrification of HLW tank heels and residual High Activity Waste. Produce approximately 88 canisters of HLW during FY 1998. Develop EIS preferred alternative and continue comment resolution process for the Draft EIS. The NYSERDA, DOE, and NRC are to publish supplemental Draft EIS and Final EIS. Project management and site support activities conducted at an appropriate level for safe site configuration and compliance issues.

Budget Year Achievements (FY 1999)

Continue the vitrification of HLW tank heels and residual High Activity Waste producing approximately 15 to 35 canisters of HLW. Continue safe storage of HLW canisters. Prepare Supplemental Draft EIS and issue to public for comment. Initiate upgrade of the rail spur to SNF storage facility. Mobilize SNF equipment and facilities. Project management and site support activities conducted at an appropriate level for safe site configuration and compliance issues.

1. Title and Location of Project:	West Valley Demonstration Project,
2a. Project No.:	West Valley, New York
2b. Operating Funded	

11. Schedule of Project Funding and Other Related Funding Requirements

Project Budget	<u>Prior</u>	<u>FY1997</u>	<u>FY1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY2001-2005</u>	<u>Total</u>
1. Operating Funded TEC							
Construction	206,000	0	0	0	0	0	206,000
2. Facility Other Operating	1,057,463	130,380	124,540	119,220	144,111	950,451	2,526,165
3. Total WVDP	1,263,463	130,380	124,540	119,220	144,111	950,451	2,732,165
4. DOE Funds	1,133,869	116,917	112,085	107,300	129,700	855,199	2,455,070
5. NYS Funds	129,594	13,463	12,455	11,920	14,411	95,252	277,095

12. Narrative Explanation of Total Project Funding and Other Related Funding Requirements

The West Valley Demonstration Project (WVDP) has formulated a plan that describes the process and activities required to achieve Project completion by the end of FY 2005. This Plan delineates the activities required to significantly reduce current environmental risk and mortgage costs associated with the Project and satisfy the Department of Energy's (DOE's) responsibilities as controlled by the WVDP Act, Public Law 96-368. The WVDP plan to complete the Project by the end of FY 2006 is described by four major subprojects.

- High-Level Waste Vitrification and Tank Heel and Residual High Activity Waste Processing

This subproject encompasses the solidification of HLW into borosilicate glass using vitrification. Liquid HLW vitrification operations were initiated in July 1996 and are scheduled to continue through the third quarter of FY 1998. This represents a significant achievement for the DOE and a critical event toward completion of the WVDP Act. After HLW liquid processing, the Project will continue to use vitrification to process the HLW tank heels and residual high activity waste. Planning and preparatory work is currently underway, and vitrification will continue when the primary liquid vitrification processing campaign is completed. This subproject, including the deactivation of the vitrification processing facility, will continue into FY 2002.

1. Title and Location of Project:	West Valley Demonstration Project,
2a. Project No.:	West Valley, New York
2b. Operating Funded	

12. Narrative Explanation of Total Project Funding and Other Related Funding Requirements (cont'd)

- Site Transition, Decommissioning, and Project Completion

This subproject includes activities required to remove HLW canisters and TRU waste from Project facilities, dispose of low-level waste (LLW) in accordance with the WVDP Act and Stipulation of Compromise as directed by the Record of Decision (ROD), implementation of other related activities associated with the ROD, and disposition of the remaining Project completion responsibilities. The State of New York and DOE are working together to formulate a preferred alternative with input from the Public, including the Citizens Task Force (CTF). The subsequent ROD will provide the decision to implement the preferred alternative. This subproject runs concurrently with HLW vitrification processing and tank residual high activity waste processing with completion by the end of FY 2006.

- Spent Nuclear Fuel (shown for information only; funding/scope not included in this data sheet)

This subproject includes the work scope necessary to remove the existing Spent Nuclear Fuel inventory from the site. Shipment of the fuel is scheduled for completion during Fourth Quarter FY 2001. While not a direct part of the WVDP Act scope, this effort is a part of DOE's obligations at this site. Plans are being developed to ship the spent fuel assemblies to the Idaho National Engineering and Environmental Laboratory (INEEL) beginning in FY 2001, consistent with the DOE/Navy/State of Idaho Consent Order Settlement Agreement on Spent Fuel and Nuclear Waste. The stabilization and deactivation/decommissioning of Spent Nuclear Fuel facilities are scheduled for completion in FY 2006.

- Project Management/Site Support

Project mission success is dependent upon full funding of the project management/site support functions as the project has no independently funded centralized infrastructure organizations. Project Management includes general support cost estimates relating to project management, human resources, program planning, Chief Financial Officer, procurement, financial control, and program reporting functions. Site Support characterizes the annual site estimates for mission support activities and includes security, regulatory compliance, environmental safety and health, facilities management (i.e., engineering, maintenance, utilities), training, quality assurance, and warehousing.

1. Title and Location of Project:	West Valley Demonstration Project,
2a. Project No.:	West Valley, New York
2b. Operating Funded	

12. Narrative Explanation of Total Project Funding and Other Related Funding Requirements (cont'd)

Capital Equipment

This category provides equipment used in initial site takeover operations and restoration activities, such as health physics and environmental monitoring instrumentation and equipment, decontamination and decommissioning tools and equipment, manipulators and hot cells lights, and analytical chemical laboratory equipment.

DEPARTMENT OF ENERGY
FY 1999 CONGRESSIONAL BUDGET REQUEST
NON-DEFENSE ENVIRONMENTAL MANAGEMENT
SITE/PROJECT COMPLETION
(Tabular dollars in thousands, narrative in whole dollars)

PROGRAM MISSION

The non-defense SITE/PROJECT COMPLETION account will provide funding for projects that will be completed by FY 2006 at sites or facilities where a DOE mission will continue (e.g., environmental management or scientific research) beyond 2006. Hence, this account focuses on completion of specific projects at sites with expected enduring missions.

This account includes projects that will be performed by the following operations offices: Albuquerque (AL), Chicago (CH), Idaho (ID), Oakland (OAK), and Richland (RL). The account focuses managers on completing projects by 2006, and distinguishes these projects from other long-term activities at the sites, such as waste management (e.g., high level waste vitrification), or the Department's other enduring missions such as those carried out by the Offices of Defense Programs, Nuclear Energy, and Energy Research. Although the largest amount of funding for project completion activities is in the defense account, a greater number of sites is funded in the Non-Defense SITE/PROJECT COMPLETION account.

The largest number of sites funded by the Non-Defense SITE/PROJECT COMPLETION account are located in California and are managed by the Oakland Operations Office: Stanford Linear Accelerator, Lawrence Berkeley Laboratory, General Electric Vallecitos Nuclear Center, General Atomics, and the Laboratory for Energy Related Health Research. There are also two sites in California funded by the Defense Project Completion Account.

The only site managed by the Albuquerque Operations Office and funded by this account is the Lovelace Biomedical and Environmental Research Institute. Most sites managed by this office are funded from the Defense Project Completion Account.

The Chicago Operations Office will manage a number of projects funded by the Non-Defense SITE/PROJECT COMPLETION account at sites where scientific research projects are expected to continue after 2006. These sites include the Brookhaven National Laboratory in New York, Argonne National Laboratory - East, in Illinois, and -West, in Idaho, and the Princeton Plasma Physics Laboratory in New Jersey.

SITE/PROJECT COMPLETION - NON-DEFENSE - PROGRAM MISSION (cont'd)

The Richland and Idaho Operations Offices will manage activities with funds from the SITE/PROJECT COMPLETION account at the Hanford site and the Idaho National Engineering and Environmental Laboratory, respectively.

In a limited number of cases, the account includes sites where no enduring mission is expected beyond 2006 and the cleanup will be completed by 2006. Funding these sites from the SITE/PROJECT COMPLETION account rather than the NON-DEFENSE SITE CLOSURE account will provide the operations office which manages the project with greater flexibility in managing the funds for the project. Use of the NON-DEFENSE SITE CLOSURE account for these sites would impose an additional appropriation control on the funds for the cleanup of these sites without any commensurate benefit.

DEPARTMENT OF ENERGY
FY 1999 CONGRESSIONAL BUDGET REQUEST
NON-DEFENSE ENVIRONMENTAL MANAGEMENT
SITE/PROJECT COMPLETION
(Tabular dollars in thousands, narrative in whole dollars)

PROGRAM FUNDING PROFILE

<u>Subprogram</u>	FY 1997 Adjusted <u>Appropriation</u>	FY 1998 Adjusted <u>Appropriation</u>	FY 1999 Budget <u>Request</u>
Remedial Action/Release Sites	\$32,330	\$35,135	\$34,504
Facility Decommissioning	12,749	17,459	24,706
Facilities Deactivation	19,652	20,676	1,907
Nuclear Materials Stabilization	0	0	0
Spent Nuclear Fuel Stabilization	8,031	354	0
Landlord	17,911	8,217	6,493
High-Level Waste	0	0	0
Transuranic Waste	882	542	976
Mixed Low-Level Waste	5,166	5,080	5,245
Low-Level Waste	14,976	15,253	13,204
Hazardous Waste	7,751	4,965	4,781
Other Waste	2,906	0	0
Long-Term Surveillance and Maintenance	31	232	412
Program Support	17,209	6,037	5,020
Uranium Leasing	<u>0</u>	<u>0</u>	<u>0</u>
 TOTAL, SITE/PROJECT COMPLETION	 \$139,594	 \$113,950	 \$97,248
 Operations and Maintenance (non-add)	 [\$130,957]	 [\$113,553]	 [\$97,248]
Construction (non-add)	[8,637]	[397]	[0]

SITE/PROJECT COMPLETION - NON-DEFENSE - PROGRAM FUNDING PROFILE

Public Law Authorizations

Pub. Law 95-91, Department of Energy Organization Act (1977)

Pub. Law 105-62, The Energy and Water Development Appropriations Act, Fiscal Year 1998

DEPARTMENT OF ENERGY
FY 1999 CONGRESSIONAL BUDGET REQUEST
NON-DEFENSE ENVIRONMENTAL MANAGEMENT
SITE/PROJECT COMPLETION
(Tabular dollars in thousands, narrative in whole dollars)

PROGRAM FUNDING BY SITE

	FY 1997 Adjusted <u>Appropriation</u>	FY 1998 Adjusted <u>Appropriation</u>	FY 1999 Budget <u>Request</u>
<u>Field Offices/Sites</u>			
ALBUQUERQUE OPERATIONS OFFICE			
Lovelace BERI (NM)	<u>\$919</u>	<u>\$743</u>	<u>\$478</u>
Subtotal, ALBUQUERQUE	\$919	\$743	\$478
CHICAGO OPERATIONS OFFICE			
Ames Laboratory (IA)	\$287	\$260	\$260
Argonne National Laboratory (East) (IL)	20,253	12,013	17,006
Argonne National Laboratory (West) (ID)	6,665	3,600	2,711
Brookhaven National Laboratory (NY)	28,306	24,900	24,300
Chicago Operations Office (IL)	1,047	1,551	597
FERMI Laboratory (IL)	2,100	0	0
Princeton Plasma Physics Laboratory (NJ)	<u>3,699</u>	<u>3,389</u>	<u>4,626</u>
Subtotal, CHICAGO	\$62,357	\$45,713	\$49,500
IDAHO OPERATIONS OFFICE			
Idaho National Engineering and Environmental Lab. (ID).	<u>\$15,734</u>	<u>\$7,171</u>	<u>\$10,263</u>
Subtotal, IDAHO	\$15,734	\$7,171	\$10,263

SITE/PROJECT COMPLETION - NON-DEFENSE - PROGRAM FUNDING BY SITE

	FY 1997 Adjusted <u>Appropriation</u>	FY 1998 Adjusted <u>Appropriation</u>	FY 1999 Budget <u>Request</u>
<u>Field Offices/Sites</u>			
OAKLAND OPERATIONS OFFICE			
Energy Tech Eng. Center/SSFL	\$16,824	\$17,426	\$16,494
General Atomics	3,600	4,100	2,030
General Electric	0	106	519
Geothermal Test Facility	1,000	0	0
Lawrence Berkeley National Laboratory (CA)	8,748	11,177	10,668
Oakland Operations Office (CA)	3,955	687	0
Stanford Linear Acceler. Center	995	995	1,000
U.C. Davis/LEHR	<u>4,007</u>	<u>5,156</u>	<u>4,389</u>
Subtotal, OAKLAND	\$39,129	\$39,647	\$35,100
RICHLAND OPERATIONS OFFICE			
Hanford (WA)	<u>\$21,455</u>	<u>\$20,676</u> a/	<u>\$1,907</u>
Subtotal, RICHLAND	\$21,455	\$20,676	\$1,907
TOTAL, SITE/PROJECT COMPLETION	<u>\$139,594</u>	<u>\$113,950</u>	<u>\$97,248</u>

a/ Does not reflect \$30,904,000 for FFTF.

SITE/PROJECT COMPLETION - NON-DEFENSE

ALBUQUERQUE

I. Mission Supporting Goals and Objectives:

MISSION

The Environmental Management (EM) Program, managed through the Albuquerque Operations Office, supports activities at one site in one state; the Lovelace Biomedical and Environmental Research Institute (BERI), formerly the Inhalation Toxicology Research Institute (ITRI) in New Mexico.

2006 STRATEGY

In accordance with the Draft 2006 Plan, the Albuquerque Operations Office goal is to complete cleanup of all geographic sites under its cognizance, except for LANL, by FY 2006. Continued Albuquerque progress will culminate in the completion of the ITRI site.

FY 1999 PROGRAM

At the Lovelace BERI, located in Albuquerque, New Mexico, studies have been conducted on the health effects of inhaling potentially hazardous airborne materials that might be found in industry, the environment, or the home. Initial assessment activity began in FY 1991, and remedial activity was completed in FY 1996, including remediation of all nine release sites. Ground water monitoring efforts will continue.

Research activities at Lovelace BERI produced vary small amounts of biomedical, transuranic, mixed, low-level, hazardous, and sanitary waste. Hazardous waste is collected, stored temporarily on site, and shipped offsite for commercial recycling/treatment/disposal. Transuranic waste is shipped to the Sandia National Laboratory-New Mexico for packaging and storage pending regulatory changes that would permit disposal at the Waste Isolation Pilot Project site. Low-level waste is compacted on-site, packaged and labeled for disposal at the Nevada Test Site. Mixed low-level waste is shipped to an offsite commercial facility for treatment and disposal. Non-hazardous biomedical waste is treated onsite via a crematory and disposed

SITE/PROJECT COMPLETION - NON-DEFENSE - ALBUQUERQUE (cont'd)

I. Mission Supporting Goals and Objectives: (cont'd)

FY 1999 PROGRAM (cont'd)

of as such. Beginning in 1997, Lovelace BERI entered into a five-year Cooperative Agreement with the DOE, after which time DOE will reassess renewal of the Agreement.

II. Funding Schedule:

<u>Program Activity</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>	<u>\$ Change</u>	<u>% Change</u>
Remedial Action/Release Sites	\$ 323	\$ 0	\$ 0	\$ 0	N/A
Transuranic Waste	5	0	4	+4	+100%
Mixed Low-Level Waste	18	21	11	-10	-48%
Low-Level Waste	43	55	30	-25	-45%
Hazardous Waste	89	94	62	-32	-34%
Program Support	441	378	302	-76	-20%
Long-Term Surveillance and Maintenance <u>-65%</u>		<u>0</u>	<u>195</u>	<u>69</u>	<u>-126</u>
TOTAL, Albuquerque	<u>\$ 919</u>	<u>\$ 743</u>	<u>\$ 478</u>	<u>\$ -265</u>	<u>-36%</u>

III. Performance Summary - Accomplishments:

[PBS Numbers are Bracketed in the Text]

Remedial Action/Release Sites

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
Conduct remediation activities at Lovelace BERI. [AL005]	\$323	\$0	\$0
• In FY 1997, carried out ground water monitoring efforts and project closeout activities.			
• In FY 1998, no activity.			

SITE/PROJECT COMPLETION - NON-DEFENSE - ALBUQUERQUE (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Remedial Action/Release Sites</u> (cont'd)			
<ul style="list-style-type: none"> In FY 1999, no activity. 			
Subtotal, Remedial Action/Release Sites	<u>\$323</u>	<u>\$0</u>	<u>\$0</u>
<u>Transuranic Waste</u>			
Small quantities of transuranic waste are shipped to Sandia National Laboratory, NM, from LBERI for interim storage pending regulatory changes that would permit disposal in of the Waste Isolation Project Plant (WIPP). [AL005]	\$5	\$0	\$4
Treatment			
<ul style="list-style-type: none"> In FY 1997, 0 cubic meters of TRU waste were treated. In FY 1998, 0 cubic meters of TRU waste will be treated. In FY 1999, 0.1 cubic meters of TRU waste will be treated. 			
Storage			
<ul style="list-style-type: none"> In FY 1997, 0.5 cubic meters of TRU waste were stored. In FY 1998, 0 cubic meters of TRU waste will be stored. In FY 1999, 0.3 cubic meters of TRU waste will be stored. 			
Disposal			
<ul style="list-style-type: none"> In FY 1997, 0 cubic meters of TRU waste were disposed. In FY 1998, 0 cubic meters of TRU waste will be disposed. In FY 1999, 0.3 cubic meters of TRU waste will be disposed. 			
Subtotal, Transuranic Waste	<u>\$5</u>	<u>\$0</u>	<u>\$4</u>

SITE/PROJECT COMPLETION - NON-DEFENSE - ALBUQUERQUE (cont'd)

III. Performance Summary - Accomplishments:

Mixed Low-Level Waste

Provides for the collection, storage, treatment and disposal of MLLW to off-site DOE/commercial facilities.[AL005]

FY 1997 **FY 1998** **FY 1999**

\$18 \$21 \$11

Treatment

- In FY 1997, 1 cubic meters of MLLW were treated.
- In FY 1998, 1 cubic meters of MLLW will be treated.
- In FY 1999, 0.7 cubic meters of MLLW will be treated.

Storage

- In FY 1997, 1 cubic meters of MLLW were stored.
- In FY 1998, 1 cubic meters of MLLW will be stored.
- In FY 1999, 0.7 cubic meters of MLLW will be stored.

Disposal

- In FY 1997, 1 cubic meters of MLLW were disposed.
- In FY 1998, 1 cubic meters of MLLW will be disposed.
- In FY 1999, 0.7 cubic meters of MLLW will be disposed.

Subtotal, Mixed Low-Level Waste

\$18 \$21 \$11

SITE/PROJECT COMPLETION - NON-DEFENSE - ALBUQUERQUE (cont'd)

III. Performance Summary - Accomplishments:

Low-Level Waste

Provides for the collecting, packaging, labeling and shipment of new LLW from Lovelace BERI to the Nevada Test Site for disposal. There is no legacy waste at Lovelace BERI. [AL005]

FY 1997 **FY 1998** **FY 1999**

\$43 \$55 \$30

- In FY 1997, continued storage, treatment, and disposal.
- In FY 1998, continue storage, treatment, and disposal.
- In FY 1999, continue storage, treatment, and disposal.

Treatment

- In FY 1997, 60 cubic meters of LLW was treated.
- In FY 1998, 79 cubic meters of LLW will be treated.
- In FY 1999, 40 cubic meters of LLW will be treated.

Storage

- In FY 1997, 31 cubic meters of LLW was stored.
- In FY 1998, 50 cubic meters of LLW will be stored.
- In FY 1999, 20 cubic meters of LLW will be stored.

Disposal

- In FY 1997, 31 cubic meters of LLW was disposed.
- In FY 1998, 0 cubic meters of LLW will be disposed.
- In FY 1999, 20 cubic meters of LLW will be disposed.

Subtotal, Low-Level Waste

\$43

\$55

\$30

SITE/PROJECT COMPLETION - NON-DEFENSE - ALBUQUERQUE (cont'd)

III. Performance Summary - Accomplishments:

Hazardous Waste

Provides for the proper collecting, storing and shipment off-site of RCRA hazardous waste. Hazardous waste is temporarily stored on-site for up to 270 days and then shipped off-site to commercial recycling facilities or RCRA treatment and disposal facilities. [AL005]

FY 1997 **FY 1998** **FY 1999**

\$89 \$94 \$62

Treatment

- In FY 1997, 2.70 metric tons of hazardous waste was treated.
- In FY 1998, 4.10 metric tons of hazardous waste will be treated.
- In FY 1999, 2.80 metric tons of hazardous waste will be treated.

Storage

- In FY 1997, 2.70 metric tons of hazardous waste was stored.
- In FY 1998, 4.10 metric tons of hazardous waste will be stored.
- In FY 1999, 2.80 metric tons of hazardous waste will be stored.

Disposal

- In FY 1997, 2.70 metric tons of hazardous waste was disposed.
- In FY 1998, 4.10 metric tons of hazardous waste will be disposed.
- In FY 1999, 2.80 metric tons of hazardous waste will be disposed.

Subtotal, Hazardous Waste

\$89 **\$94** **\$62**

SITE/PROJECT COMPLETION - NON-DEFENSE - ALBUQUERQUE (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Program Support</u>			
Program support for waste activities at Lovelace BERI. [AL005]	\$441	\$378	\$302
• In FY 1997, continued support.			
• In FY 1998, continue support.			
• In FY 1999, continue support.			
Subtotal, Program Support	\$441	\$378	\$302
<u>Long-Term Surveillance and Maintenance (Remediation)</u>			
Carry out long-term monitoring at Lovelace Biomedical and Environmental Research Institute (formerly ITRI). [AL005]	\$0	\$195	\$69
• In FY 1997, no activity.			
• In FY 1998 initiate long-term monitoring.			
• In FY 1999, continue long-term monitoring.			
Subtotal, Long-Term Surveillance and Maintenance (Remediation)	\$0	\$195	\$69
TOTAL, ALBUQUERQUE	<u>\$919</u>	<u>\$743</u>	<u>\$478</u>

Explanation of Funding Changes From FY 1998 to FY 1999:

Transuranic Waste: Increase due to shipment of one drum of TRU waste for interim storage at SNL. \$+4

Mixed Low-Level Waste: Decrease related to lower volume of waste requiring treatment storage and disposal.
\$-10

Low-Level Waste: Decrease related to reduced volume of waste requiring treatment and storage.

\$-25

SITE/PROJECT COMPLETION - NON-DEFENSE - ALBUQUERQUE (cont'd)

Explanation of Funding Changes From FY 1998 to FY 1999: (cont'd)

Hazardous Waste: Decrease related to reduced volumes of waste being disposed. \$-32

Program Support: Reduction to waste management activities results in less program management to support the cooperative agreement with the Office of Energy Research. \$-76

Long-Term Surveillance and Maintenance (Remediation): Decrease due to initiation of monitoring in FY 1998 with only data collection in FY 1999. \$-126

Total Funding Change, Albuquerque \$-265

SITE/PROJECT COMPLETION - NON-DEFENSE

CHICAGO

I. Mission Supporting Goals and Objectives:

MISSION

The Environmental Management (EM) program managed through the Chicago Operations Office supports activities at seven sites in five states. These sites include the Ames Laboratory in Iowa; the Argonne National Laboratory - East (ANL-E), Site A, and Fermi National Accelerator Laboratory (FERMI) in Illinois; the Argonne National Laboratory - West (ANL-W) in Idaho; Princeton Plasma Physics Laboratory (PPPL) in New Jersey; and the Brookhaven National Laboratory (BNL) in New York. Management and funding for surveillance and maintenance at the Hallam site in Nebraska, and the Piqua site in Ohio have been transferred to the Long Term Surveillance and Maintenance (LTSM) program, which is managed by the Grand Junction Office in Colorado.

The EM objective at the Chicago Operations Office is to manage the risks associated with sites contaminated with various hazardous and radioactive materials. This includes responsibility for the assessment and remediation of contaminated sites and facilities; characterization, treatment, minimization, storage and disposal of hazardous and radioactive waste; development, demonstration, testing, and evaluation of new cleanup technologies; environmental safety; and completion of decontamination and decommissioning of surplus facilities in the current EM baseline.

The primary mission of the facilities under the Chicago Operations Office is research, development, and demonstration for DOE Energy Research and Nuclear Energy programs. This includes support of the nation's advanced reactor program and research on the fundamental properties of matter, physics, life, and environmental sciences; magnetic confinement fusion and high-energy physics. By-products of this mission include transuranic (TRU) waste, low-level waste (LLW), hazardous waste, and mixed low-level waste (MLLW) (radioactive and hazardous combined). The Chicago Operations Office's facilities are aging, and many include former waste disposal sites that need to be assessed according to today's standards to determine the extent of environmental contamination and the need for remediation.

SITE/PROJECT COMPLETION - NON-DEFENSE - CHICAGO (cont'd)

I. Mission Supporting Goals and Objectives: (cont'd)

2006 STRATEGY

The strategy of the Draft 2006 Plan is to complete remediation of all Chicago sites by 2006, and to transfer management of all newly-generated waste from ongoing operations back to the generator. By 2000 all legacy MLLW and LLW will be disposed. There is expected to be no EM funding for Chicago sites beyond 2006. EM activities for Chicago in FY 1999 support the 2006 vision by completing remedial action at ANL-W; continuing remedial activities at ANL-E and BNL; and continuing ongoing waste operations and preparing for transfer of management of these activities to the generators. Chicago is pursuing waste management initiatives to reduce and contain costs, and to enhance productivity. Examples include the establishment of waste minimization goals, privatization or out-sourcing of waste functions, activity based costing analysis of waste operations, bench marking, value engineering, performance based contracting, preliminary “necessary and sufficient” type approaches to waste management drivers and risk-based release limits.

FY 1999 PROGRAM

Environmental Restoration activities at Chicago will be complete at all sites except ANL-E and BNL by the end of FY 1999. Waste management activities at Chicago are designed to ensure minimization, safe handling, and disposal of waste for generators at Ames, ANL-E, BNL, and PPPL. The main types of waste associated with these facilities are low-level waste (LLW), mixed low-level waste (MLLW), hazardous, and transuranic waste. Chicago will treat and dispose of approximately 42 cubic meters of MLLW in FY 1999. Beginning in FY 2000, the annual projected generation for MLLW is expected to be about 13 cubic meters at an annual cost of approximately \$1,000,000. Chicago will treat and dispose of approximately 1,320 cubic meters of LLW in FY 1999. Beginning in FY 2000, the annual projected generation for LLW is expected to be about 950 cubic meters at an annual cost of approximately \$4,500,000. Hazardous waste is treated and disposed in compliance with regulations. The yearly treatment and disposal volumes of hazardous waste are about 375 m³ at an annual cost of approximately \$2,600,000. Chicago will manage a program for 96 cubic meters of legacy TRU waste at ANL-E. Activities are underway to prepare all ANL-E TRU waste for disposal in the Waste Isolation Pilot Plant (WIPP) by the end of FY 2000.

The Ames Laboratory is located on a property owned by Iowa State University. Outside of the limits of the city of Ames, a chemical disposal site was active from 1958 to 1966. The Ames Laboratory is comprised of 11 release sites, which were all

SITE/PROJECT COMPLETION - NON-DEFENSE - CHICAGO (cont'd)

I. Mission Supporting Goals and Objectives: (cont'd)

FY 1999 PROGRAM (cont'd)

completed by the end of FY 1997. Waste management activities supported under the non-defense appropriation will be completed in FY 2000, when responsibility for waste activities is returned to the DOE Office of Energy Research.

The FERMI site is located in Batavia, Illinois, and is a DOE Office of Energy Research facility with a mission to conduct research in high-energy physics. In FY 1997, responsibility for management of newly generated waste, as part of the reengineering pilot program, was transferred to the Office of Energy Research and funding for waste management activities was transferred to that office in FY 1998. All legacy LLW was disposed of at the end of FY 1997. All remediation activities at the FERMI site were completed in FY 1992.

The ANL-E site is a research laboratory occupying a 700-acre tract of land located approximately 22 miles southwest of downtown Chicago in DuPage County, Illinois. Research activities have been ongoing since World War II. Ninety-six cubic meters of TRU waste are also managed at ANL-E. Efforts are underway to prepare this TRU waste for disposal by the end of FY 2000. Beginning in FY 2000, annual projected waste volumes to be shipped to WIPP are estimated to be about four cubic meters at an estimated annual cost of about \$200,000. All legacy LLW will be disposed by the end of FY 2000. Additionally, ANL-E has 439 release sites and 81 facilities. Through FY 1997, remediation of 413 release sites and 40 facilities were completed. Remediation completion of release sites and facilities is scheduled as follows: two release sites and two facilities in FY 1998; and one release site and zero facilities in FY 1999. Beginning in FY 2000, responsibility for management of newly generated waste will be transferred to DOE's Office of Energy Research.

The ANL-W site is located 35 miles west of Idaho Falls, Idaho, and is operated by the University of Chicago under the direction of the Chicago Operations Office. ANL-W was constructed for the purpose of carrying out research and development for liquid metal fast breeder reactor technology. ANL-W has 37 release sites and one facility, of which 29 release sites were completed by the end of FY 1997. Three additional release sites and one facility are scheduled for completion in FY 1998; and the final five release sites will be completed in FY 1999. All remediation activities will be complete at ANL-W by the end of FY 1999. Waste management activities occur at ANL-W; however, beginning in FY 1998, the responsibility for managing newly generated waste, as part of the reengineering pilot program, was transferred to DOE's Office of Nuclear Energy. There is up to

SITE/PROJECT COMPLETION - NON-DEFENSE - CHICAGO (cont'd)

I. Mission Supporting Goals and Objectives: (cont'd)

FY 1999 PROGRAM (cont'd)

\$1,615,000 in the FY 1998 EM budget that is to be managed by the Office of Nuclear Energy for waste activities at ANL-W. A full budget target transfer is completed through the FY 1999 Budget Request. All legacy LLW was disposed of in FY 1997.

Site A is a site where early activities were conducted by the Manhattan Engineer District between 1942 and 1956. It is located in the Palos Forest Preserve in Cook County, Illinois, and contained two experimental nuclear reactors and associate research laboratories. Site A is comprised of ten release sites, which were all completed by the end of FY 1997. Management and funding for surveillance and maintenance activities have been transferred to the Long Term Surveillance and Maintenance (LTSM) Program, which is under the responsibility of the Grand Junction Office in Colorado.

The PPPL in Princeton, New Jersey, is a single purpose laboratory focusing on research and development for fusion energy programs. PPPL will complete remediation at all eight release sites in FY 1998 and continue S&M and Site A & B payments thereafter. Responsibility for waste management activities are proposed for transfer to DOE's Office of Energy Research in FY 2000. Legacy LLW waste at PPPL will be disposed of by the end of FY 2000.

The BNL site is a multi-purpose research and development laboratory located in central Suffolk County on Long Island about 60 miles east of New York City. Scientific and technical efforts are carried out at BNL, including low and high energy physics, life sciences, and nuclear medicine research. BNL is comprised of 74 release sites and three facilities. Through the end of FY 1997, 50 release sites were completed. Twelve additional release sites are scheduled for completion in FY 1998; and two additional in FY 1999. In FY 2000, responsibility for all waste management activities will be transferred to the Office of Energy Research.

COMPLIANCE DRIVERS

The Chicago Operations Office manages, coordinates, tracks, and assists in the implementation of programs among the various sites. Chicago also administers grants with the State of New York. Major legal drivers include the Resource Conservation and Recovery Act (RCRA), the Comprehensive Environmental Response Compensation and Liability Act

(CERCLA), state laws, and Federal Facility Agreements (FFA) among DOE, EPA, and the State of New York for BNL and the State of Idaho for ANL-W.

SITE/PROJECT COMPLETION - NON-DEFENSE - CHICAGO (cont'd)

II. Funding Schedule:

<u>Program Activity</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>	<u>\$ Change</u>	<u>% Change</u>
Remedial Action/Release Sites	\$ 23,332	\$ 24,190	\$ 25,894	\$ +1,704	+7%
Facility Decommissioning	4,751	2,124	5,736	+3,612	+170%
Transuranic Waste	852	517	187	-330	-64%
Mixed Low-Level Waste	1,684	903	999	+96	+11%
Low-Level Waste	7,233	6,158	4,778	-1,380	-22%
Hazardous Waste	6,074	2,623	2,691	+68	+3%
Other Waste	1,103	0	0	0	0%
Landlord	4,534	4,217	4,213	-4	0%
Long-Term Monitoring	31	37	343	+306	+827%
Program Support	<u>12,763</u>	<u>4,944</u>	<u>4,659</u>	<u>-285</u>	<u>-6%</u>
TOTAL, Chicago	<u>\$ 62,357</u>	<u>\$ 45,713</u>	<u>\$ 49,500</u>	<u>\$ +3,787</u>	<u>+8%</u>

III. Performance Summary - Accomplishments:

[PBS numbers are bracketed in the text]

Remedial Action/Release Sites

Conduct assessment and remediation activities at BNL to reduce risk and comply with FFA. [CHBN0006]

<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
\$17,296	\$19,200	\$18,000

SITE/PROJECT COMPLETION - NON-DEFENSE - CHICAGO (cont'd)

III. Performance Summary - Accomplishments:

FY 1997

FY 1998

FY 1999

Remedial Action/Release Sites (cont'd)

Assessment activities at BNL include:

- In FY 1997:
 - Completed 19 release site assessments, including the Agricultural Field/ethylene dibromide.
 - Continued site-wide characterization activities.
 - Continued assessments at the Waste Management Areas, Landfills; the Graphite Research Reactor and Scrapyard areas; the Sewage Treatment Plant; and the Potable/Supply Wells, Spills. Geoprobes were used for rapid low-cost sampling as an innovative technology.
- In FY 1998:
 - Complete 16 release assessments including, the Sewage Treatment Plant; the Waste Management Areas, Landfills; the Graphite Research Reactor and Scrapyard Areas; and the Potable/Supply Wells, Spills.
 - Continue site-wide characterization activities.
- In FY 1999:
 - Complete site-wide characterization activities.

Remediation activities at BNL include:

- In FY 1997:
 - Completed 25 release site cleanups.
 - Completed installation and began operation of ground water treatment system.
 - Continued installation of drinking water hookups.
 - Completed capping of the former landfill.
 - Began interim action for removal of buried waste.
 - Initiated remediation of the Central Steam Facility.

SITE/PROJECT COMPLETION - NON-DEFENSE - CHICAGO (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Remedial Action/Release Sites</u> (cont'd)			
<ul style="list-style-type: none"> In FY 1998: <ul style="list-style-type: none"> - Complete 12 release site cleanups. - Accelerate and complete interim action for removal of buried waste. - Complete drinking water hookups for a total of 1,300 hookups from FY 1996 through FY 1998. - Continue ground water treatment activities, and remediation of the Central Steam Facilities. - Begin remediation of the Agricultural Field/ethylene dibromide and Scrapyard areas. - Begin construction of innovative technology of in-well air sparging for off-site ground water remediation. This technology will provide a substantially less invasive presence off-site on non-DOE-owned property, and is expected to reduce long-term operation and maintenance costs compared to pump-and-treat technology. In FY 1999: <ul style="list-style-type: none"> - Complete 2 release site cleanups. - Continue ground water treatment activities and begin or continue remediation of all operable units, including the Boneyard, Central Steam Facilities, Agricultural Field/ethylene dibromide, the Sewage Treatment Plant, Waste Management Areas, Landfills, the Graphite Research Reactor and Scrapyard Areas; and the Potable/Supply Wells, spills. 			
Conduct activities at the ANL-W Waste Area Group (WAG) 9 to assess and reduce risk and comply with the FFA. [CHAW0029]	\$1,115	\$1,201	\$2,711
<ul style="list-style-type: none"> In FY 1997: <ul style="list-style-type: none"> - Completed interim actions at the Experimental Breeder Reactor II (EBR II) Transformer Yard and Leach Pit. - Continued characterization on all other WAG 9 activities . 			

SITE/PROJECT COMPLETION - NON-DEFENSE - CHICAGO (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Remedial Action/Release Sites</u> (cont'd)			
<ul style="list-style-type: none"> In FY 1998: <ul style="list-style-type: none"> Complete the final 8 release site assessments. Complete 3 release site cleanups. Begin remediation for all remaining WAG 9 activities. In FY 1999: <ul style="list-style-type: none"> Complete remediation on all 5 remaining release site cleanups at WAG 9. 			
Conduct remediation activities at ANL-E to reduce risk and comply with the RCRA permit also funded under the Defense EM appropriation. [CHAE-0002]	\$4,000	\$3,300	\$3,700
<ul style="list-style-type: none"> In FY 1997: <ul style="list-style-type: none"> Completed 33 release sites assessments including the Solid Waste and Mixed Waste Disposal Areas. Completed 23 release site cleanups including off-site ground water barrier. Began removal of the 317 Area French Drain. In FY 1998: <ul style="list-style-type: none"> Complete 2 release site assessments, 2 release site cleanups, and removal of the 317-Area French Drain. Demonstrate soil-mixing technology. Begin final remediation of Solid Waste and Mixed Waste Disposal areas. In FY 1999: <ul style="list-style-type: none"> Complete 7 release site assessments and 1 release site cleanup. Continue remediation of Solid Waste and Mixed Waste Disposal Areas. 			

SITE/PROJECT COMPLETION - NON-DEFENSE - CHICAGO (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Remedial Action/Release Sites</u> (cont'd)			
Conduct activities at the PPPL to assess and reduce risk and comply with the Memorandum of Understanding between DOE and the Princeton University. [CHPL-0027]	\$500	\$489	\$1,483
<ul style="list-style-type: none"> • In FY 1997, completed removal of contaminated soil and characterization of Sites C/D and continued payments for remediation/assessment of Sites A/B. • In FY 1998, complete assessment and remediation at all 8 release sites, Sites C/D release sites and continue payments for remediation of Sites A/B. • In FY 1999, continue Site A/B remediation payments. 			
Provide for characterization/remediation and program management at the Chemical Disposal Site at Ames to reduce risk and comply with State law. [CHAM-0025]	\$80	\$0	\$0
<ul style="list-style-type: none"> • In FY 1997, completed all characterization and remediation efforts for the last release site; and began surveillance and maintenance (No-Action Remedy). • In FY 1998, no activity. • In FY 1999, no activity. 			
Conduct remediation of Site A to reduce risk and transfer property back to private owner with continued long-term surveillance and maintenance by EM. [CHSA-0031]	\$341	\$0	\$0
<ul style="list-style-type: none"> • In FY 1997, remediation of the final 2 release sites at Site A was completed and the site was returned to the private owner. 			

SITE/PROJECT COMPLETION - NON-DEFENSE - CHICAGO (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Remedial Action/Release Sites</u> (cont'd)			
<ul style="list-style-type: none"> In FY 1998, long-term surveillance and maintenance activities are supported under the Defense Appropriation. In FY 1999, long-term surveillance and maintenance provided for under the Grand Junction Office at Albuquerque in the EM Non-Defense Appropriation. 			
Subtotal, Remedial Action/Release Sites	\$23,332	\$24,190	\$25,894
<u>Facility Decommissioning</u>			
Conduct facility decommissioning activities at ANL-E. [CHAE0003]	\$4,093	\$1,325	\$5,736
<ul style="list-style-type: none"> In FY 1997: <ul style="list-style-type: none"> Completed 2 facility assessments and 11 facility cleanups, including final D&D of the Fast Neutron Generator and the JANUS Reactor. Continued D&D of the CP-5 Reactor. Continued surveillance and maintenance. In FY 1998: <ul style="list-style-type: none"> Complete 22 facility assessments and 2 facility cleanups, including removal of CP-5 Reactor Rod Storage Area, Reactor Vessel, and Fuel Pool. Continue D&D of CP-5 Reactor. Complete "further application recommendations" for 22 CP-5 technology demonstrations. Continue surveillance and maintenance. Use of technology development initiatives include a large scale demonstration project and a public/private sector partnership. These demonstrations allowed rapid comparison of a variety of commercially-available and innovative technologies, consider possible use of lower-cost technologies for the CP-5 decommissioning . Cost sharing was 			

SITE/PROJECT COMPLETION - NON-DEFENSE - CHICAGO (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Facility Decommissioning</u> (cont'd)			
<ul style="list-style-type: none"> In FY 1998: (cont'd) provided by private industry and utilities, and results of the demonstrations are being considered for use at other ANL-E facilities, at other DOE facilities such as Hanford, Oak Ridge, and INEEL, as well as at private and utility sites. In FY 1999: <ul style="list-style-type: none"> - Continue D&D of the CP-5 Reactor. - Begin D&D of the Argonne Thermal Source Reactor and the Zero Power Reactor. 			
Conduct facility decommissioning of the Central Liquid Waste Processing Area at ANL-W. [CHAW0029]	\$558	\$799	\$0
<ul style="list-style-type: none"> In FY 1997, began design for D&D. In FY 1998, complete design and begin and complete D&D for the last facility. In FY 1999, no activity. 			
Conduct facility decommissioning at BNL. [CHBN0006]	\$100	\$0	\$0
<ul style="list-style-type: none"> In FY 1997, began preliminary assessment of the Graphite Research Reactor. In FY 1998, no activity. In FY 1999, no activity. 			
Subtotal, Facility Decommissioning	\$4,751	\$2,124	\$5,736

SITE/PROJECT COMPLETION - NON-DEFENSE - CHICAGO (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Transuranic Waste</u> [CHAE0004; CHAW0034]			
Perform all necessary activities to safely and compliantly store legacy transuranic waste at ANL-E and ANL-W sites in FY 1997, and the ANL-E in FY 1998 and FY 1999. In FY 1998, the ANL-W TRU program was transferred to the Office of Nuclear Energy (NE) and will be managed and funded by the NE program.	\$852	\$517	\$187
Treatment			
<ul style="list-style-type: none"> In FY 1997, 0 cubic meters of TRU waste was treated. In FY 1998, 59 cubic meters of TRU waste will be treated. In FY 1999, 0 cubic meters of TRU waste will be treated. 			
Storage			
<ul style="list-style-type: none"> In FY 1997, 89 cubic meters of TRU waste was stored. In FY 1998, 92 cubic meters of TRU waste will be stored. In FY 1999, 96 cubic meters of TRU waste will be stored. 			
Disposal			
<ul style="list-style-type: none"> In FY 1997, 0 cubic meters of TRU waste was disposed. In FY 1998, 0 cubic meters of TRU waste will be disposed. In FY 1999, 0 cubic meters of TRU waste will be disposed. 			
Subtotal, Transuranic Waste	\$852	\$517	\$187

SITE/PROJECT COMPLETION - NON-DEFENSE - CHICAGO (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Mixed Low-Level Waste</u> [CHAE0004; CHAW0034; CHBN0023; CHPL0028]			
Perform all necessary activities to safely and compliantly store, treat, and dispose of mixed low-level radioactive waste (MLLW) at ANL-E, ANL-W, BNL, and PPPL sites. Legacy MLLW will be treated and disposed from all sites except ANL-W by FY 2003. Any remaining legacy waste, and all newly generated waste, at ANL-W after FY 1997 will be transferred to the Office of Nuclear Energy (NE).			
In FY 1997, initiate treatment of bulk sodium at ANL-W Source Processing Facility to reduce environmental and safety risks and to meet a Federal Facility Compliance Act Site Treatment Plan milestone. The processing/operation was transferred to NE in FY 1997 and NE will fund the remaining portion in FY 1998 to complete treatment.	\$1,684	\$903	\$999
Treatment			
<ul style="list-style-type: none"> In FY 1997, 48 cubic meters of MLLW was treated. In FY 1998, 31 cubic meters of MLLW will be treated. In FY 1999, 28 cubic meters of MLLW will be treated. 			
Storage			
<ul style="list-style-type: none"> In FY 1997, 547 cubic meters of MLLW was stored. In FY 1998, 124 cubic meters of MLLW will be stored. In FY 1999, 117 cubic meters of MLLW will be stored. 			
Disposal			
<ul style="list-style-type: none"> In FY 1997, 20 cubic meters of MLLW was disposed. In FY 1998, 7 cubic meters of MLLW will be disposed. In FY 1999, 14 cubic meters of MLLW will be disposed. 			
	_____	_____	_____

Subtotal, Mixed Low-Level Waste

\$1,684

\$903

\$999

SITE/PROJECT COMPLETION - NON-DEFENSE - CHICAGO (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Low-Level Waste</u>			
[CHAM0026; CHAE0004; CHAW0034; CHBN0023; CHFR0035; CHPL0028]			
Perform all necessary activities to safely and compliantly store, treat, and dispose of low-level radioactive waste (LLW) at Ames, ANL-E, ANL-W, BNL, Fermi, and PPPL. Beginning in FY 1998, the LLW program at Fermi and ANL-W is being transferred to the Offices of Energy Research (ER) and the Office of Nuclear Energy (NE), respectively, and the budget and waste volumes shown here reflect this transfer. All legacy LLW at Fermi and ANL-W will be disposed by the end of FY 1997.	\$7,233	\$6,158	\$4,778
Treatment			
• In FY 1997, 1,103 cubic meters of LLW was treated.			
• In FY 1998, 487 cubic meters of LLW will be treated.			
• In FY 1999, 786 cubic meters of LLW will be treated.			
Storage			
• In FY 1997, 840 cubic meters of LLW was stored.			
• In FY 1998, 375 cubic meters of LLW will be stored.			
• In FY 1999, 315 cubic meters of LLW will be stored.			
Disposal			
• In FY 1997, 1,470 cubic meters of LLW was disposed.			
• In FY 1998, 607 cubic meters of LLW will be disposed.			
• In FY 1999, 531 cubic meters of LLW will be disposed.			
Subtotal, Low-Level Waste	\$7,233	\$6,158	\$4,778

SITE/PROJECT COMPLETION - NON-DEFENSE - CHICAGO (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Hazardous Waste</u> [CHAM0026; CHAE0004; CHAW0034; CHBN0023; CHFR0035; CHPL0028]			
Perform all necessary activities to safely and compliantly store, treat, and dispose of hazardous waste at Ames, ANL-E, ANL-W, BNL, Fermi, and PPPL sites. However, beginning in FY 1998 the hazardous waste at Fermi and ANL-W is being transferred to the Office of Energy Research (ER) and the Office of Nuclear Energy (NE), respectively	\$6,074	\$2,623	\$2,691
Treatment			
• In FY 1997, 54 metric tons of hazardous waste was treated.			
• In FY 1998, 82 metric tons of hazardous waste will be treated.			
• In FY 1999, 82 metric tons of hazardous waste will be treated.			
Storage			
• In FY 1997, 9 metric tons of hazardous waste was stored.			
• In FY 1998, 0 metric tons of hazardous waste will be stored.			
• In FY 1999, 0 metric tons of hazardous waste will be stored.			
Disposal			
• In FY 1997, 509 metric tons of hazardous waste was disposed.			
• In FY 1998, 279 metric tons of hazardous waste will be disposed.			
• In FY 1999, 291 metric tons of hazardous waste will be disposed.			
Subtotal, Hazardous Waste	\$ 6,074	\$ 2,623	\$ 2,691

SITE/PROJECT COMPLETION - NON-DEFENSE - CHICAGO (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Other Waste</u> [CHAE0004]			
Complete rehabilitation of the liquid LLW area and upgrade fire safety systems in the ANL-E Waste Management building, Phase II of Project 91-E-600.	\$1,103	\$0	\$0
Subtotal, Other Waste	\$1,103	\$0	\$0

Landlord

This includes planning, operating, maintenance, construction and capital equipment design and procurement costs, associated with general site-wide infrastructure and non-infrastructure services, and Intergovernmental/Stakeholder outreach services. Example of general services include: utilities, transportation, roads etc. Example of Intergovernmental/Stakeholder outreach services include: payment-in-lieu-of-taxes, oversight/state permits, site-specific advisory boards, health information and screening, support of geologic surveys, etc.

	\$4,534	\$4,217	\$4,213
Subtotal, Landlord	\$4,534	\$4,217	\$4,213

Long-Term Monitoring

Provide for long-term surveillance and maintenance for Hallam and Piqua to maintain contaminated facilities in a safe condition. Transfers to LTS&M program at the Grand Junction Office under Albuquerque in FY 1999. [CHCH0030]

	\$31	\$37	\$0
In FY 1999, begin surveillance and maintenance of sites C/D at PPPL. [CHPL0027]	\$0	\$0	\$343
Subtotal, Long-Term Monitoring	\$31	\$37	\$343

SITE/PROJECT COMPLETION - NON-DEFENSE - CHICAGO (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Program Support</u> [CHAE0004; CHAW0034; CHBN0023; CHPL0025; CHAE0001; CHAW0029; CHBN0005]			
Provides for crosscutting EM support activities at CH, ANL-E, ANL-W, PPPL, Ames, and BNL to provide a safe and effective environmental management program to reduce environmental and health risks at six sites in FY 1997 and four sites in FY 1998 and FY 1999, including support of compliance, quality, safety and health, project technical support including technology application, sample and data management, design support, regulatory support, project and program support including procurement, records and document control and planning, baseline management, project control systems and performance metrics and BNL to provide for state grants and to address implementation of DNFSB-93-2.	\$12,763	\$4,944	\$4,659
Subtotal, Program Support	<u>\$12,763</u>	<u>\$4,944</u>	<u>\$4,659</u>
TOTAL, CHICAGO	<u>\$62,357</u>	<u>\$45,713</u>	<u>\$49,500</u>

Explanation of Funding Changes From FY 1998 to FY 1999:

<u>Remedial Action/Release Sites:</u> Increase is for ANL-E remediation activities.	\$+400
Increase to PPPL for Site A/B payments.	\$+994
Increase to ANL-W is to complete remediation.	\$+1,510
Decrease to BNL due to completion of drinking water hookups and interim action for removal of \$-1,200 buried waste in FY 1998.	

SITE/PROJECT COMPLETION - NON-DEFENSE - CHICAGO (cont'd)

Explanation of Funding Changes From FY 1998 to FY 1999: (cont'd)

Facility Decommissioning: Increase reflects completion of the D&D Central Liquid Waste Processing Area at ANL-W. \$-799

Begin D&D of Argonne Thermal Source Reactor and the Zero Power Reactor. \$+4,411

Transuranic Waste: The decreased cost is the result of no additional treatment needs for TRU waste in FY 1999. \$-330

Mixed Low-Level Waste: The increase reflects disposal of greater waste volumes. \$+96

Low-Level Waste: The decrease reflects smaller disposal expenses for treatment of waste volumes. \$-1,380

Hazardous Waste: No significant change. \$+68

Landlord: No significant change. \$-4

Long-Term Monitoring: Responsibility for surveillance and maintenance of Hallam and Piqua \$-37
were transferred to Grand Junction in FY 1999.

Initiate S&M activities at sites C/D at PPPL. \$+343

Program Support: Decreased technical support for remediation and D&D activities including \$-285
compliance, quality, safety and health-related activities.

Total Funding Change, Chicago **\$+3,787**

SITE/PROJECT COMPLETION - NON-DEFENSE

IDAHO

I. Mission Supporting Goals and Objectives:

MISSION

The Idaho National Engineering and Environmental Laboratory (INEEL), situated on 890 square miles of the Snake River Plain in southeastern Idaho, was established in 1949 as the National Reactor Testing Station. Over the years, 52 reactors have been constructed and operated at INEEL. Three of these reactor facilities (Power Burst Facility, Advanced and Coupled Fast Reactivity Measurement Facility, and Material Test Reactor Canal) are managed by the Office of Environmental Management (EM). Environmental Management is also responsible for the construction of a dry storage facility for 145 m³ of Three Mile Island Unit-2 (TMI-2) spent nuclear fuel that is currently in underwater storage at the INEEL's Test Area North (TAN). Environmental Management also provides technical assistance to requesting States and compact regions responsible for commercial low-level radioactive waste through its management of the National Low-Level Waste Program (NLLWP).

2006 STRATEGY

Throughout the DOE complex, EM is focused on accelerating cleanup and, where possible, completing its mission by FY 2006. At the INEEL, all three of the non-defense elements of the EM mission will be completed within the FY 2006 time frame. The three reactor facilities will be deactivated, the TMI-2 fuel will be in safe, dry storage, and EM's NLLWP responsibilities will be completed.

FY 1999 PROGRAM

In FY 1999, construction of the TMI-2 fuel storage facility will be finished, completing the final non-defense activity in the Spent Nuclear Fuel Stabilization Program. At the end of FY 1999, one of the three EM reactor facilities in the Facility Deactivation Program (the Advanced and Fast Coupled Reactivity Measurement Facility) will be in a deactivated, low-cost, surveillance and maintenance condition awaiting final decommissioning. Plans will be completed for deactivation of the two remaining facilities (the Material Test Reactor Canal and the Power Burst Facility) in FY 1999. This will allow the Material

Test Reactor Canal to be deactivated by FY 2000 and the Power Burst Facility to be deactivated by FY 2001.

SITE/PROJECT COMPLETION - NON-DEFENSE - IDAHO (cont'd)

I. Mission Supporting Goals and Objectives: (cont'd)

COMPLIANCE DRIVER

The EM program at INEEL ensures compliance with regulatory requirements and negotiated agreements. The storage facility for the TMI-2 fuel must be completed in early FY 1999 to meet DOE commitments contained in the Idaho Settlement Agreement. The major responsibilities for the NLLWP are driven by the Low-Level Radioactive Waste Policy Amendments Act of 1985 (P.L. 99-240) and are twofold: 1) provide technical assistance to states and low-level waste compact regions who are responsible for developing disposal capacity for commercially generated low-level waste; and 2) fulfill the Department's responsibility to develop disposal capacity for the Greater-Than-Class-C (GTCC) Low-Level Waste. The key goals and objectives of the NLLWP are accomplished through providing: workshops, technical reports, automated systems, and a variety of other work products based on specific requests from states and critical information exchange opportunities through sponsoring the Low-Level Radioactive Waste Forum, the Host State Technical Coordinating Committee, and periodic national conferences on low-level waste management. Additional funding and new workscope related to the receipt of sealed sources for meeting the Department's responsibilities can be found under the Multi-Site Activities section of this budget.

II. Funding Schedule:

<u>Program Activity</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>	<u>\$ Change</u>	<u>% Change</u>
Facilities Deactivation	\$3,150	\$2,119	\$6,083	\$+3,964	+187%
Spent Nuclear Fuel Stabilization	8,031	354	0	-354	-100%
National Low-Level Waste Program . . .	<u>4,553</u>	<u>4,698</u>	<u>4,180</u>	<u>-518</u>	<u>-11%</u>
TOTAL, Idaho	<u>\$15,734</u>	<u>\$7,171</u>	<u>\$10,263</u>	<u>\$+3,092</u>	<u>+43%</u>

SITE/PROJECT COMPLETION - NON-DEFENSE - IDAHO (cont'd)

III. Performance Summary - Accomplishments:

[PBS numbers are bracketed in the text]

FY 1997

FY 1998

FY 1999

Facilities Deactivation [PBS# ID-OIM-110 and ID-OIM-112]

The Facility Deactivation Program maintains three EM surplus reactor facilities in a safe, secure, and environmentally sound condition until deactivation of the facilities is completed. The Advanced Reactivity/Coupled Fast Reactivity Measurement Facilities were deactivated in FY 1997. The Materials Test Reactor Canal will be deactivated in FY 2000 and the Power Burst Facility will be deactivated in FY 2001.

\$3,150

\$2,119

\$6,083

- In FY 1997:
 - 0.2 metric tons heavy metal (MTHM) (0.5 m³) of SNF was stabilized at the Advanced Reactivity/Coupled Fast Reactivity Measurement Facilities (ARMF/CFRMF) and transferred to dry storage. This was 100 percent of the ARMF/CFRMF spent fuel inventory.
 - Continued the Materials Test Reactor (MTR) Canal surveillance and maintenance deactivation activities to prevent release of contaminants and protect personnel.
 - Performed surveillance and maintenance activities at the Power Burst Facility (PBF).
 - Maintained nuclear criticality safety, industrial safety, RCRA compliance, and contamination control.
 - Completed structural and equipment preventive and corrective maintenance.
 - Initiated deactivation planning for the Materials Test Reactor (MTR) Canal.
- In FY 1998:
 - Continue the surveillance and maintenance activities at the MTR Canal and PBF.
 - Continue MTR Canal deactivation design.
- In FY 1999:
 - Will complete the deactivation planning and continue the surveillance and maintenance activities at the MTR Canal and PBF.
 - Will complete removal of spent fuel (3.0 cubic meters) from the MTR Canal and continue the Canal deactivation.
 - Will initiate PBF deactivation.

SITE/PROJECT COMPLETION - NON-DEFENSE - IDAHO (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Facilities Deactivation</u> [PBS# ID-OIM-110 and ID-OIM-112] (cont'd)			
The Performance Metrics for this section are facilities deactivated.			
• In FY 1997, one building was deactivated.			
• In FY 1998, no buildings will be deactivated.			
• In FY 1999, no buildings will be deactivated.			
Subtotal, Facilities Deactivation	\$3,150	\$2,119	\$6,083

Spent Nuclear Fuel Stabilization [PBS # ID-SNF-104]

The Spent Nuclear Fuel Stabilization Program at INEEL is focused on constructing a new facility (this Independent Spent Fuel Storage Installation; ISFSI); that will allow the Three Mile Island Unit-2 (TMI-2) fuel to be removed from wet storage in the Test Area North and placed in stable, dry interim storage. Completion of the facility in FY 1999 is an important part of the Department's effort to meet commitments in the Idaho Settlement Agreement.

The TMI-2 SNF inventory at the INEEL (145 m³) will be moved to the new facility by FY 2001 using funds requested through the Defense Appropriation.

	\$8,031	\$354	\$0
• In FY 1997:			
- Submitted NRC license application for the TMI-2 Independent Spent Fuel Storage Installation (ISFSI) facility (Project No. 93-E-900).			
- Continued design efforts for the Dry Cask Storage Project.			
• In FY 1998:			
- Complete design and initiate construction of the TMI-2 ISFSI.			
• In FY 1999:			
- Will conduct minimal activities early in the fiscal year to complete ISFSI construction with prior year funds.			
- Will initiate TMI-2 fuel transfers and will operate ISFSI using funding in the Defense Appropriation.			

SITE/PROJECT COMPLETION - NON-DEFENSE - IDAHO (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Spent Nuclear Fuel Stabilization</u> [PBS # ID-SNF-104] (cont'd)			

Subtotal, Spent Nuclear Fuel Stabilization	\$8,031	\$354	\$ 0
---	----------------	--------------	-------------

National Low-Level Waste Program [PBS # ID-WM-102]

Program Management activities provide for technical support to the States and compact regions, and address DOE's Greater-Than-Class-C Low-Level Waste responsibilities.	\$4,553	\$4,698	\$4,180
---	---------	---------	---------

- In FY 1997:
 - Completed a total of 38 workshops and supported requests by States and compacts consistent with customer priorities.
 - Supported the most important communication and information exchange opportunities through the Low-Level Waste (LLW) Forum, the Host State Technical Coordinating Committee, the Conference of State Legislatures, and the Conference of Radiation Control Program Directors.
 - Provided a more cost-effective way of delivering technical assistance to States, the National Program shared the cost of two technical assistance projects with Texas.
- In FY 1998:
 - Assist the States of California, as it continues through the land transfer process, and Texas, Nebraska, and North Carolina as they complete their multi-year licensing processes.
 - Assist States with innovative ways to provide for disposal of LLW.
 - Implement more cost shared technical assistance activities with States and examine more innovative and cost effective means of providing technical assistance with States.
 - Assist the Center of Excellence for LLW/MLLW in communicating DOE's planned methods for managing LLW/MLLW in the complex through existing relationships with the LLW Forum, Council of Radiation Control Program Directors, and the National Conference of State Legislatures.

SITE/PROJECT COMPLETION - NON-DEFENSE - IDAHO (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>National Low-Level Waste Program</u> [PBS # ID-WM-102] (cont'd)			
<ul style="list-style-type: none"> • In FY 1999: <ul style="list-style-type: none"> - Assist the State of California in the land transfer process. - Assist Texas, Nebraska, and North Carolina in their multi-year licensing processes. - Assist States with innovative ways to provide for disposal of LLW. - Support important communication and information exchange opportunities through the Host State Technical Coordinating Committee, LLW Forum, Conference of Radiation Control Program Directors, and the National Conference of State Legislatures to aid States in communication with the public. - Assist the Center of Excellence for LLW/MLLW in communicating DOE's planned methods for managing LLW/MLLW in the complex through existing relationships with the LLW Forum, Conference of Radiation Control Program Directors, and the National Conference of State Legislatures. - Plan Greater-Than-Class-C environmental impact statement work contingent on language in proposed HLW legislation. - Constrained budgets will require the Department to implement more cost sharing and partnering arrangements to continue quality technical assistance to states as mandated by Public Law 99-240. 			
Subtotal, National Low-Level Waste Program	<u>\$4,553</u>	<u>\$4,698</u>	<u>\$4,180</u>
TOTAL, IDAHO	<u>\$15,734</u>	<u>\$7,171</u>	<u>\$10,263</u>

SITE/PROJECT COMPLETION - NON-DEFENSE - IDAHO (cont'd)

Explanation of Funding Changes From FY 1998 to FY 1999:

Facilities Deactivation: The increase in Facilities Deactivation funding is necessary in order to complete the MTR Canal Deactivation Project in FY 2000, and to initiate the Power Burst Facility deactivation in FY 1999.

\$+3,964

Spent Nuclear Fuel Stabilization: The decrease in Spent Nuclear Fuel (SNF) Surveillance and Maintenance funding reflects completion of the major construction activities for the TMI-2 dry storage facility construction project in FY 1998.

\$-354

National Low-Level Waste Program: The decrease reflects targeted efficiencies in planned work and restrictions on new initiatives for Greater-Than-Class-C waste.

\$-518

Total Funding Change, Idaho

\$+3,092

SITE/PROJECT COMPLETION - NON-DEFENSE

OAKLAND

I. Mission Supporting Goals and Objectives

MISSION

The Non-Defense EM Program managed through the Oakland Operations Office (OAK) supports activities at seven locations in the State of California. These sites include the Lawrence Berkeley National Laboratory (LBNL), the Energy Technology Engineering Center (ETEC), the General Electric Vallecitos Nuclear Center (GE), the General Atomics (GA) facility, the Laboratory for Energy-Related Health Research (LEHR), the Stanford Linear Accelerator Center (SLAC), and the Geothermal Test Facility (GTF). The EM objective is to manage the risks associated with sites contaminated with various hazardous and radioactive materials. This includes responsibility for the assessment and remediation of contaminated sites and facilities; characterization, treatment, minimization, storage, and disposal of hazardous and radioactive waste; technology development, environmental safety; and completion of decontamination and decommissioning of surplus facilities in the current EM baseline. At the ETEC and LEHR sites, contract reform initiatives are being pursued that will result in reduced life-cycle costs and earlier completion dates. In addition to managing the restoration and waste management programs at the various sites, the Oakland Operations Office administers grants for the State of California for their oversight activities.

2006 STRATEGY

In carrying out the vision of the Draft 2006 Plan, OAK is committed to maintaining compliance with all regulatory requirements and agreements, and to address any urgent risks in an expeditious manner. Oakland is committed to working with regulators and stakeholders, where needed, to explore more appropriate options and will not implement any changes until they are agreed to formally. Despite the challenges, OAK plans to achieve its mission by taking an integrated approach to perform, schedule, and assess the work while balancing them against risk, mortgage reduction, compliance, cost efficiency, and stakeholder input. All of the Oakland Non-Defense funded sites will be cleaned up and all legacy waste will be characterized and shipped to appropriate disposal sites by 2006. The efficiency related savings necessary to achieve the EM goals is on the average of approximately 14 percent through 2006, and as high as 17 percent for FY 1999, as reported in the OAK Draft 2006 Plan.

SITE/PROJECT COMPLETION - NON-DEFENSE - OAKLAND (cont'd)

I. Mission Supporting Goals and Objectives

FY 1999 PROGRAM

The 130-acre LBNL site is located adjacent to the University of California in Berkeley. LBNL conducts a wide variety of energy-related research activities for the Department, including energy, environment, physics, transportation, computers, biology, and medicine. Remediation activities at LBNL primarily focus on characterization and remediation of contaminated soil and ground water and the RCRA closure of an existing Hazardous Waste Handling Facility. There are 171 release sites and one facility at the LBNL site, of which 116 release sites were completed through FY 1997. In FY 1997, 19 assessments and 18 release sites were completed. In FY 1998, 16 release site assessments, 1 facility assessment; 1 facility remediation; and site-wide investigations are scheduled for completion. In FY 1999, 2 interim corrective measures will be completed; bench and pilot scale treatability studies will be conducted; and 8 assessments and 1 release site is scheduled for completion. Waste Management activities provide compliant storage, treatment, and off-site disposal of both legacy and currently generated hazardous and radioactive waste of which LLNL will begin disposal of LBNL backlog of noncompactible LLW to Hanford in FY 1999. Environmental Restoration activities will be completed in FY 2003 and all legacy waste characterization and off-site disposal will be completed by 2005 as identified in the Draft 2006 Plan.

The ETEC is a DOE facility located on 90 acres of leased land from Boeing North America Corporation in Simi Valley, California. The objective of the EM program at ETEC is to complete RCRA cleanup of 7 release sites, remediate contaminated ground water, complete D&D of 25 radiological facilities, deactivate and cleanup 21 sodium facilities, provide landlord activities, and manage waste disposal to achieve overall site closure by FY 2006. Waste characterization and off-site disposal will be completed by FY 2005. Through FY 1997, 1 release site, 16 radiological facilities, and 1 sodium facility have been remediated. Two facilities (1 radiological and 1 sodium) and 2 release sites will be remediated in FY 1998. In FY 1999, 1 facility (Building 059) will be demolished, 1 sodium facility will be remediated, and a ground water remediation system will begin operation to treat trichloroethylene/trichloroethane (TCE/TCA). All of these activities contribute to meeting the overall ETEC site closure by FY 2006.

The General Electric site is a privately-owned site located near Pleasanton, California. Activities are focused on cleanup of a High Level Hot Cell constructed in 1958 for post-irradiation examination of uranium fuel and irradiated reactor components and a Glove Box Enclosure. In FY 1998, surveillance, maintenance and characterization activities will be initiated and continued in

SITE/PROJECT COMPLETION - NON-DEFENSE - OAKLAND (cont'd)

I. Mission Supporting Goals and Objectives

FY 1999 PROGRAM (cont'd)

FY 1999. The GE site is comprised of 2 facilities whose cleanup will be completed within the FY 2006 time frame. After DOE work is completed, the facility will be returned to the landowners for their use.

The GA site is privately-owned and is located near San Diego, California. This site has maintained and operated a Hot Cell Facility for over 30 years to conduct both Government and commercially funded nuclear research and development. Efforts will focus on cleanup of the Hot Cell Facility and surrounding contaminated soils. The GA site is comprised of 1 facility and 2 release sites. Through FY 1999, 2 remedial cleanups (soil and 1 underground storage tank) and the facility decontamination and demolition will be completed. Final cleanup activities will be completed in FY 2001, after the removal of legacy waste as identified in the Draft 2006 Plan. After DOE work is completed, the facility will be returned to the landowners for their use.

The LEHR site is located at the University of California, Davis. Research at the laboratory originally focused on the health effects from chronic exposure to radionuclides using animal subjects to simulate radiation effects on humans. DOE terminated the research program and closed the laboratory in 1988. Activities focus on cleaning up DOE areas of site contamination for release to the University of California, Davis, without radiological restrictions. The LEHR site is comprised of 6 release sites and 6 facilities. Through FY 1997, remediation of 5 facilities was completed. The remaining facility is scheduled for RCRA closure completion in FY 2000. One removal action is scheduled for completion in FY 1998. In FY 1999, 1 removal action is scheduled for completion. Waste characterization and off-site disposal will be completed by 2001. As set forth in the Draft 2006 Plan, overall site completion is scheduled for FY 2001 after the site is delisted from the Environmental Protection Agency (EPA) National Priority List (NPL).

The SLAC site is a 426-acre site located at Stanford University in California. It is managed under contract between DOE and Stanford University where theoretical research in high-energy particle physics is conducted. Remediation efforts focus on cleanup of polychlorinated biphenyls contaminated soil sites and several solvent-contaminated ground water sites. The SLAC site is comprised of 14 release sites; through FY 1996, eight were completed. In FY 1997 soil and ground water assessment activities continued and ground water monitoring efforts were initiated in FY 1998. The remaining six release sites are forecast to be completed by FY 2000 in accordance with the Draft 2006 Plan schedule.

SITE/PROJECT COMPLETION - NON-DEFENSE - OAKLAND (cont'd)

I. Mission Supporting Goals and Objectives

FY 1999 PROGRAM (cont'd)

The Geothermal Test Facility (GTF) is an 82 acre site located 20 miles east of El Centro, California. The site was formerly used by DOE to perform studies for geothermal power. The site is located on property owned by the Bureau of Land Management over which the DOE has a right-of-way agreement. The GTF is comprised of four facilities and three release sites (removal of approximately 23,000 metric tons of contaminated brine soils), all of which were completed by FY 1997. The property has been returned to the Bureau of Land Management.

The Oakland Operations Office has plans for the use of innovative technology at several of its installations. A new remediation technology using water-vapor and nitrogen was chosen for cleaning the sodium loop/systems at ETEC. This technology was selected because it was proven to be a cost-effective method for the removal of sodium and will not generate hazardous waste. Other innovative technologies are being considered at ETEC for testing ground water remediation. These technologies are anaerobic bioremediation, steam injection, ozone injection, biosparging, moving bed liquid phase carbon adsorption and high vacuum dual phase extraction. The technology selected must be cost-effective to implement and have no adverse impact on neighboring property. Decreased contamination migration during the pilot tests is considered a goal. Technologies being considered at LEHR will allow for recycling and reuse of material and waste from past D&D operations and characterization activities. When appropriate, either microencapsulation for lead, waste stabilization or compaction will be used. Currently there is no technology identified for the cleanup of tritiated water. At the LBNL site, the preferred option for tritium remediation is natural attenuation.

COMPLIANCE DRIVERS

Major legal drivers at Oakland sites include RCRA, the Toxic Substances Control Act, the California Porter-Cologne Act, Nuclear Regulatory Commission license termination requirements, CERCLA, and the Clean Water Act. The current funding for all non-defense activities at OAK meets compliance with all State and Federal Regulations.

SITE/PROJECT COMPLETION - NON-DEFENSE - OAKLAND (cont'd)

II. Funding Schedule

<u>Program Activity</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>	<u>\$ Change</u>	<u>% Change</u>
Remedial Action/Release Site	\$ 8,675	\$10,945	\$ 8,610	\$-2,335	-21%
Facility Decommissioning	4,848	13,216	12,887	-329	-2%
Landlord	13,377	4,000	2,280	-1,720	-43%
Transuranic Waste	25	25	785	+760	+3,040%
Mixed Low-Level Waste	3,464	4,156	4,235	+79	+2%
Low-Level Waste	3,147	4,342	4,216	-126	-3%
Hazardous Waste	1,588	2,248	2,028	-220	-10%
Program Support	<u>4,005</u>	<u>715</u>	<u>59</u>	<u>-656</u>	<u>-92%</u>
 TOTAL, Oakland	 <u>\$ 39,129</u>	 <u>\$ 39,647</u>	 <u>\$ 35,100</u>	 <u>\$-4,547</u>	 <u>-11%</u>

III. Performance Summary - Accomplishments:
[PBS numbers are bracketed in the text]

FY 1997 **FY 1998** **FY 1999**

Remedial Action/Release Sites

Conduct site-wide activities at the Lawrence Berkeley National Laboratory
[OK-003, 004]

\$3,154 \$3,990 \$3,500

• In FY 1997:

- Continued site-wide investigative work.
- Completed Phase III Resource Conservation and Recovery Act Facility (RCRA) Investigation report and risk assessment.
- Prepared a draft report for the other contaminants.
- Completed 2 interim corrective measures and continued operation of treatment facilities.
- Completed Hazardous Waste Handling Facility (HWHF) closure plans.

SITE/PROJECT COMPLETION - NON-DEFENSE - OAKLAND (cont'd)

III. Performance Summary - Accomplishments:

FY 1997

FY 1998

FY 1999

Remedial Action/Release Sites (cont'd)

Conduct site-wide activities at the Lawrence Berkeley National Laboratory
[OK-003, 004] (cont'd)

- In FY 1997: (cont'd)
 - Completed 19 assessments and 18 release sites.
 - Continued program management and quarterly sampling, data management and reporting as required by RCRA and State Regulators.
- In FY 1998:
 - Complete site-wide investigative work.
 - Complete site-wide risk assessment.
 - Initiate efforts on the Corrective Measures Study.
 - Perform 6 additional interim corrective measures.
 - Continue maintenance and operation of existing corrective measure ground water treatment systems.
 - Complete assessment; initiate and complete closure of the HWHF.
 - Complete 16 release site assessments.
 - Continue program management and quarterly sampling, data management and reporting as required by RCRA and State regulators.
- In FY 1999:
 - Perform 2 interim corrective measures.
 - Develop the corrective measures plan.
 - Conduct bench scale and pilot scale treatability studies.
 - Continue monitoring, maintenance and operations of all interim corrective measure ground water systems under remediation.
 - Complete 8 assessments and 1 release site and continue program management and sampling activities.

SITE/PROJECT COMPLETION - NON-DEFENSE - OAKLAND (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Remedial Action/Release Sites</u> (cont'd)			
Carry out soil and ground water activities at the Stanford Linear Acceleration Center [OK-005]	\$995	\$995	\$1,000
<ul style="list-style-type: none"> • In FY 1997: <ul style="list-style-type: none"> - Continued soil and ground water assessment activities and associated program management in accordance with the small site initiative. - Completed feasibility study for former solvent underground storage tank area. • In FY 1998: <ul style="list-style-type: none"> - Initiate and complete ground water monitoring efforts. - Complete assessment of former solvent underground storage tank release site. - Complete assessment and cleanup of test lab/central lab (monitoring well 24 Area) release site. • In FY 1999: <ul style="list-style-type: none"> - Continue ground water monitoring. - Complete remedial action plan and pilot test for selected remedial alternative at the former solvent underground storage tank area. 			
Conduct soil removal actions at the Laboratory for Energy-Related Health Research [OK-010]	\$3,535	\$4,880	\$3,030
<ul style="list-style-type: none"> • In FY 1997: <ul style="list-style-type: none"> - Completed draft Engineering Evaluation/Cost Analysis (EE/CA) for three DOE source area removal actions. • In FY 1998: <ul style="list-style-type: none"> - Continue disposal of environmental monitoring and restoration activity waste. - Complete 1 release site removal action. • In FY 1999: <ul style="list-style-type: none"> - Complete removal action at one release site. 			

SITE/PROJECT COMPLETION - NON-DEFENSE - OAKLAND (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Remedial Action/Release Sites</u> (cont'd)			
Conduct remediation activities at the Energy Technology Engineering Center [OK-007]	\$991	\$1,080	\$1,080
<ul style="list-style-type: none"> • In FY 1997: <ul style="list-style-type: none"> - Completed 3 release site assessments at Old Conservation Yard, Building 056 Area Landfill, Building 064 Side Yard, and 1 release Site remediation at Building 064 Side Yard. - Initiated operation of an enhanced system for removal of TCE/TCA from ground water. - Continued operation of interim ground water treatment system. - Completed Health Based Risk Assessment for the former Sodium Disposal Facility release site. • In FY 1998: <ul style="list-style-type: none"> - Complete 2 release site assessments at Hot Lab site and Former Sodium Disposal Facility and remediation of 3 release sites at Old Conservation Yard, Hot Lab site, and Former Sodium Disposal Facility. - Continue operation of ground water extraction well system and enhanced TCE/TCA removal and select ground water treatment technology. • In FY 1999: <ul style="list-style-type: none"> - Complete remediation of one release site at Building 056 Area Landfill. - Initiate ground water remediation system and continue TCE/TCA removal. 			
Subtotal, Remedial Actions/Release Sites	\$8,675	\$10,945	\$8,610

SITE/PROJECT COMPLETION - NON-DEFENSE - OAKLAND (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Facility Decommissioning</u>			
Conduct site-wide activities at the Energy Technology Engineering Center [OK-007]	\$248	\$9,010	\$10,338
<ul style="list-style-type: none"> • In FY 1997: <ul style="list-style-type: none"> - Completed two facility assessments at Small Component Test Loop and Liquid Metal Development Laboratory and two facility decontaminations at Large Leak Test Rig and Hot Lab - Completed certification for release of five facilities (Buildings 012, 023, 028, 029, and 030) - Initiated D&D of SCTL; completed planning activities for Radioactive Materials Handling Facility D&D; removed limited quantities of low-level waste from RMHF Building 022 (stakeholder concern); and continue low-level waste disposal. • In FY 1998: <ul style="list-style-type: none"> - Complete two facility assessments at Building 104 and Building 059; complete decontamination of two facilities at LMDL 1 and Building 104. - Complete certification for release of four facilities (Buildings 019, 104, 363 and 654) - Continue D&D of SCTL, RMHF, demolition of Building 059 and low-level waste disposal. • In FY 1999: <ul style="list-style-type: none"> - Complete one facility assessment at Sodium Component Test Installation and two facility decontaminations at Building 059 demolition and SCTL. - Continue D&D of RMHF and low-level waste disposal. 			

SITE/PROJECT COMPLETION - NON-DEFENSE - OAKLAND (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Facility Decommissioning</u> (cont'd)			
Conduct characterization at Alpha Hot Cell Number 4 at the General Electric (GE) Facility [OK-013]	\$0	\$106	\$519
<ul style="list-style-type: none"> • In FY 1997: <ul style="list-style-type: none"> - No activity. • In FY 1998: <ul style="list-style-type: none"> - Surveillance and maintenance and characterization activities will be initiated. • In FY 1999: <ul style="list-style-type: none"> - Continue surveillance and maintenance and characterization activities. 			
Conduct D&D activities at the GA Hot Cell [OK-012]	\$3,600	\$4,100	\$2,030
<ul style="list-style-type: none"> • In FY 1997: <ul style="list-style-type: none"> - Continued D&D of the Hot Cell Facility (decontamination work will be completed and building demolition will be initiated). - Provided required environmental, health and safety, S&M, and program management support. - Continued shipments of generated waste to Hanford for disposal. - Completed tank removal release site assessment. • In FY 1998: <ul style="list-style-type: none"> - Continue demolition of the Hot Cell Facility. - Provide required environmental, health and safety, S&M, and program management support. - Initiate subsurface and surrounding contaminated soil removal activities. - Continue shipment of generated waste to Hanford for disposal. - Complete tank release site cleanup. 			

SITE/PROJECT COMPLETION - NON-DEFENSE - OAKLAND (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Facility Decommissioning</u> (cont'd)			
Conduct D&D activities at the GA Hot Cell [OK-012] (cont'd)			
<ul style="list-style-type: none"> In FY 1999: <ul style="list-style-type: none"> - Complete demolition of the Hot Cell Facility. - Complete contaminated soil release site removal action. - Perform Independent Verification (IV) and submit final site closure report to the regulators. - Initiate regulatory release of the site for unrestricted use. 			
Perform cleanup of the Brine Pond at the Geothermal Test Facility [OK-011]	\$1,000	\$0	\$0
<ul style="list-style-type: none"> In FY 1997: <ul style="list-style-type: none"> - Completed removal actions and site returned to land owners. In FY 1998: <ul style="list-style-type: none"> - No activity. In FY 1999: <ul style="list-style-type: none"> - No activity. 			
Subtotal, Facility Decommissioning	\$4,848	\$13,216	\$12,887

SITE/PROJECT COMPLETION - NON-DEFENSE - OAKLAND (cont'd)

III. Performance Summary - Accomplishments:

Landlord

Provide for Landlord activity at the Energy Technology Engineering Center.
[OK-007, 009]

FY 1997

FY 1998

FY 1999

\$13,377

\$4,000

\$2,280

- In FY 1997:
 - Reflects transfer of ETEC from the Office of Nuclear Energy for landlord activities.
 - Conducted S&M of Buildings 024 and 044, RMHF, waste management, environmental monitoring, bulk sodium removal from sodium facilities (SCTL and LMDL2)
 - Initiated asbestos abatement activity.
 - Issued asbestos assessment report.
 - Initiated equipment divestment activities.
- In FY 1998:
 - Continue bulk sodium removal (activities previously reflected under Facility Decommissioning).
 - Continue asbestos abatement activity.
 - Continue S&M of Buildings 024 and 044 and the RMHF.
 - Continue environmental monitoring.
 - Continue equipment divestment activities.
- In FY 1999:
 - Continue bulk sodium removal.
 - Continue asbestos abatement activities.
 - Continue S&M of Buildings 024 and 044, Sodium Pump Test Facility and the RMHF.
 - Continue environmental monitoring.
 - Continue equipment divestment activities.

Subtotal, Landlord

\$13,377

\$4,000

\$2,280

SITE/PROJECT COMPLETION - NON-DEFENSE - OAKLAND (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Transuranic Waste</u>			
The Waste Management program at Oakland manages transuranic (TRU), mixed low-level, low-level, and hazardous wastes. Management of TRU activities involve the management, repackaging and storage of TRU waste at ETEC. [OK-042]	\$25	\$25	\$785
<ul style="list-style-type: none"> • In FY 1997: <ul style="list-style-type: none"> - Funding allowed for the safe and compliant storage of TRU waste. • In FY 1998: <ul style="list-style-type: none"> - Continue FY 1997 storage activities. • In FY 1999: <ul style="list-style-type: none"> - Repackage and continue storage of TRU waste. 			
Treatment			
<ul style="list-style-type: none"> • In FY 1997, no TRU waste was treated. • In FY 1998, no TRU waste will be treated. • In FY 1999, no TRU waste will be treated. 			
Storage			
<ul style="list-style-type: none"> • In FY 1997, 8 cubic meter of TRU waste were stored. • In FY 1998, 6 cubic meter of TRU waste will be stored. • In FY 1999, 6 cubic meter of TRU waste will be stored. 			
Disposal			
<ul style="list-style-type: none"> • In FY 1997, no TRU waste was disposed. • In FY 1998, no TRU waste will be disposed. • In FY 1999, no TRU waste will be disposed. 			
Subtotal, TRU Waste	<u>\$25</u>	<u>\$25</u>	<u>\$785</u>

SITE/PROJECT COMPLETION - NON-DEFENSE - OAKLAND (cont'd)

III. Performance Summary - Accomplishments:

Mixed Low-Level Waste

The Waste Management program at Oakland manages transuranic (TRU), mixed low-level, low-level, and hazardous wastes. Management of Mixed Low-Level Waste activities involve treatment and disposal of both newly generated and legacy waste at LLBL, LEHR, and ETEC. [OK-014, 015, 016, 042]

FY 1997

FY 1998

FY 1999

\$3,464

\$4,156

\$4,235

- In FY 1997:
 - Continued legacy waste shipments to Hanford.
 - Initiated preparation for waste shipment to the Idaho National Engineering and Environmental Laboratory (INEEL).
 - Completed transfer of operations into new Hazardous Waste Handling Facility (HWHF).
 - Shipped MLLW from ETEC to Oak Ridge for treatment/disposal.
- In FY 1998:
 - Continue Hanford waste shipments.
 - Continue preparation for INEEL waste shipment in FY 2001.
- In FY 1999:
 - Continue Hanford waste shipments.
 - Continue preparation for INEEL waste shipment in FY 2001.

Treatment

- In FY 1997, 7 cubic meters of MLLW were treated.
- In FY 1998, 16 cubic meters of MLLW will be treated.
- In FY 1999, 8 cubic meters of MLLW will be treated.

SITE/PROJECT COMPLETION - NON-DEFENSE - OAKLAND (cont'd)

III. Performance Summary - Accomplishments:

Mixed Low-Level Waste (cont'd)

FY 1997 **FY 1998** **FY 1999**

Storage

- In FY 1997, 74 cubic meters of MLLW were stored.
- In FY 1998, 36 cubic meters of MLLW will be stored.
- In FY 1999, 22 cubic meters of MLLW will be stored.

Disposal

- In FY 1997, 13 cubic meters of MLLW were disposed off-site.
- In FY 1998, 16 cubic meters of MLLW will be disposed off-site.
- In FY 1999, 7 cubic meters of MLLW will be disposed off-site.

Subtotal, Mixed Low-Level Waste

\$3,464

\$4,156

\$4,235

Low-Level Waste

The Waste Management program at Oakland manages transuranic (TRU), mixed low-level low-level and hazardous wastes. Management of Low-Level Waste activities involve treatment, storage, transport and disposal of low-level waste at ETEC, LBNL and LEHR. [OK-014, 015, 016, 042]

\$3,147

\$4,342

\$4,216

- In FY 1997:
 - Continued inventory, characterization, and the restart of waste shipments from LEHR and LBNL to Hanford.
 - Shipped LLW from ETEC to off-site commercial/DOE disposal facilities.
- In FY 1998:
 - Continue characterization and waste shipments from LEHR and LBNL to Hanford.
 - Concentration of waste shipments focused on legacy LLW.
 - Continue shipment of LLW from ETEC to off-site commercial/DOE disposal facilities.

SITE/PROJECT COMPLETION - NON-DEFENSE - OAKLAND (cont'd)

III. Performance Summary - Accomplishments:

FY 1997

FY 1998

FY 1999

Low-Level Waste (cont'd)

- In FY 1999:
 - Initiate disposal of LBNL backlog noncompactible waste and LEHR restoration waste to Hanford.
 - Additional staff matrixed to characterize waste, handle equipment for increased disposal of shipments from LBNL.
 - Continue shipment of LLW from ETEC to off-site commercial/DOE disposal facilities.

Treatment

- In FY 1997, 1 cubic meters of LLW were treated.
- In FY 1998, 8 cubic meters of LLW will be treated.
- In FY 1999, 8 cubic meters of LLW will be treated.

Storage

- In FY 1997, 955 cubic meters of LLW were stored.
- In FY 1998, 4,475 cubic meters of LLW will be stored.
- In FY 1999, 3,880 cubic meters of LLW will be stored.

Disposal

- In FY 1997, 1,210 cubic meters of LLW were disposed off-site.
- In FY 1998, 1,189 cubic meters of LLW will be disposed off-site.
- In FY 1999, 2,162 cubic meters of LLW will be disposed off-site.

Subtotal, Low-Level Waste

\$3,147

\$4,342

\$4,216

SITE/PROJECT COMPLETION - NON-DEFENSE - OAKLAND (cont'd)

III. Performance Summary - Accomplishments:

Hazardous Waste

The Waste Management program at Oakland manages transuranic (TRU), mixed low-level, low-level and hazardous wastes. Management of Hazardous Waste activities involve management and disposal of hazardous waste at ETEC and LBNL. [OK-014, 015, 016, 042]

FY 1997 **FY 1998** **FY 1999**

\$1,588 \$2,248 \$2,028

- In FY 1997:
 - Continued commercial disposal of hazardous waste from LBNL and ETEC.
- In FY 1998:
 - Same activity as FY 1997.
- In FY 1999:
 - Same activity as FY 1998.

Treatment

- In FY 1997, 16 cubic meters of hazardous waste were treated.
- In FY 1998, 9 cubic meters of hazardous waste will be treated.
- In FY 1999, 9 cubic meters of hazardous waste will be treated.

Storage

- In FY 1997, no hazardous waste was stored.
- In FY 1998, 30 cubic meters of hazardous waste will be stored.
- In FY 1999, 30 cubic meters of hazardous waste will be stored.

Disposal

- In FY 1997, 118 cubic meters of hazardous waste were disposed off-site.
- In FY 1998, 1,666 cubic meters of hazardous waste will be disposed off-site.
- In FY 1999, 986 cubic meters of hazardous waste will be disposed off-site.

Subtotal, Hazardous Waste

\$1,588 **\$2,248** **\$2,028**

SITE/PROJECT COMPLETION - NON-DEFENSE - OAKLAND (cont'd)

III. Performance Summary - Accomplishments:

Program Support

Provide program management for all Oakland environmental management activities, including compliance, quality, safety and health, technical project support, environmental sciences, sample and data management, design support, regulatory support, project and program support including procurement, external affairs, records and document control, and planning and controls including document control, and planning and controls including budget planning, baseline management, project control systems, and performance measures.

- In FY 1997:
 - Supported activities as defined above as related to National programs and the operations office functions.
 - Supported cost estimating, reporting, and technical review efforts.
- In FY 1998:
 - Decrease in National program activities defined above.
 - Support cost estimating and reporting.
 - Support Pete Tribal College initiatives and Hispanic Scholarship at a lower level-of-effort (funded with Defense EM funds in FY 1997).
- In FY 1999:
 - Support activities defined above related to National programs and the operations office functions.
 - Support cost estimating, reporting, and technical review efforts.

Subtotal, Program Support

TOTAL, OAKLAND

FY 1997

FY 1998

FY 1999

\$4,005

\$715

\$59

\$4,005

\$715

\$59

\$39,129

\$39,647

\$35,100

SITE/PROJECT COMPLETION - NON-DEFENSE - OAKLAND (cont'd)

Explanation of Funding Changes from FY 1998 and FY 1999:

Remedial Actions/Release Sites: Reduction in funding at LBNL results in fewer release site assessments being completed in FY 1999. Delays in obtaining regulatory approval for cleanup goals results in completion of only one release site at LEHR in FY 1999. \$-2,335

Facility Decommissioning: Continue surveillance and maintenance and characterization activities at GE Facility, and begin contractor negotiations with GE for decommissioning of hot cell. \$+413

Increased costs associated with decommissioning larger, more complex facilities in FY 1999 at ETEC. \$+1,328

Reduced costs due to completed demolition of the Hot Cell Facility and contaminated soil removal actions at GA. \$-2,070

Landlord: Reduce activities related to the Inventory of DOE assets as efforts are focused on compliance, S&M, sodium removal, and other higher priority activities. \$-1,720

Transuranic Waste: Increase related to repackaging of TRU waste at ETEC. \$+760

Low-Level Waste/Hazardous Waste: Decrease in costs primarily associated with disposal of LLW and hazardous waste at ETEC, offset by a slight increase of treatment, storage and disposal cost of mixed low-level waste. \$-267

Program Support: No support provided for Pete Tribal Colleges and Hispanic Scholarships initiatives. \$-656

Total Funding Change, Oakland **\$-4,547**

SITE/PROJECT COMPLETION - NON-DEFENSE

RICHLAND

I. Mission Supporting Goals and Objectives:

The Non-Defense activities at Richland in FY 1999 include the final clean out of Building 309, Plutonium Recycle Test Reactor (PRTR), and surveillance and maintenance activities for buildings formerly used for Nuclear Energy (NE) research and development. In FY 1999, after Building 309/PRTR is cleaned out, it will be transferred to the Hanford Surplus Facilities Program.

II. Funding Schedule:

<u>Program Activity</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>	<u>\$ Change</u>	<u>% Change</u>
Facilities Deactivation	<u>\$21,455</u>	<u>\$20,676</u>	<u>\$1,907</u>	<u>\$-18,769</u>	<u>-91%</u>
TOTAL, Richland	<u>\$21,455</u>	<u>\$20,676</u>	<u>\$1,907</u>	<u>\$-18,769</u>	<u>-91%</u>

III. Performance Summary - Accomplishments:

FY 1997 FY 1998 FY 1999

Facility Deactivation [TP08, 11]

Facility deactivation is generally associated with the concept of mortgage reduction, which basically reduces the high annual surveillance and maintenance costs associated with nuclear facilities. Additional benefit is gained through deactivation by the reduction of risks and reduced exposure to hazards inherent in aging, deteriorating facilities. Also included are the activities associated with maintaining the minimum level of surveillance and maintenance (S&M) for facility safety. S&M activities are generally driven by maintaining the safety basis as required by the Facility Safety Activity Report, compliance activities, contaminated facility radiation protection,

SITE/PROJECT COMPLETION - NON-DEFENSE - RICHLAND (cont'd)

III. Performance Summary - Accomplishments:

FY 1997

FY 1998

FY 1999

Facility Deactivation [TP08, 11] (cont'd)

configuration management, sampling/ monitoring, emergency response, security, material control and accountability, training and certification, conduct of operations, and facility maintenance.

- In FY 1997:
 - Provided surveillance and maintenance activities for Nuclear Energy legacy buildings and Building 309/Plutonium Recycle Test Reactor (PRTR).
 - NE Legacy buildings--removed Thermal Transient Loop; Drained 46,000 gallons of sodium and shipped it to a commercial user. Cleaned residual sodium from Small Heat Transfer Loop and Thermal Transient Loop sodium tanks.
 - Building 309/PRTR--completed stabilization and closeout of the Plutonium Recycle Test Reactor (PRTR) rupture loop annex; characterized the transfer waste tank farm, the reactor, fuel examination cell, fuel storage basin and fuel transfer pit; and disconnected water supplies, process, and sanitary sewer connections.
 - Place 21 metric tons of disposition-ready uranium material in burial grounds for final disposition.
- In FY 1998:
 - Provide surveillance and maintenance activities as described in FY 1997.
 - NE Legacy Buildings--move 221-T Building sodium tanks to the 300 Area; remove sodium from 337 Building sodium loop and ship to buyer.
 - Building 309/PRTR--stabilize the fuel basin, reactor vessel, fuel examination cell, and fuel transfer pit.
 - Building 324 B-Cell Cleanout--completed spent fuel shipment to the 300 Area, completed removal and size reduction of rack 1A, and recovered 80 percent of dispersables from B-Cell floor.

SITE/PROJECT COMPLETION - NON-DEFENSE - RICHLAND (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Facility Deactivation</u> [TP08, 11] (cont'd)			
<ul style="list-style-type: none"> In FY 1999: <ul style="list-style-type: none"> Provide surveillance and maintenance activities as described in FY 1998. Building 309/PRTR--clean out the remainder of the facility and transfer to the Hanford Surplus Facility Program. 			
Deactivation			
<ul style="list-style-type: none"> In FY 1997, 2 facilities deactivated. In FY 1998, 1 facility will be deactivated. In FY 1999, 0 facilities will be deactivated. 			
Subtotal, Facility Deactivation	<u>\$21,455</u>	<u>\$20,676</u>	<u>\$1,907</u>
TOTAL, RICHLAND	<u>\$21,455</u>	<u>\$20,676</u>	<u>\$1,907</u>

Explanation of Funding Changes from FY 1998 and FY 1999:

<u>Facilities Deactivation:</u> Reduction due to completion of Building 309/PRTR cleanout and stabilization of fuel transfer pit and reactor cavity.			<u>\$-18,769</u>
Total Funding Change, Richland			<u>\$-18,769</u>

DEPARTMENT OF ENERGY
FY 1999 CONGRESSIONAL BUDGET REQUEST
NON-DEFENSE ENVIRONMENTAL MANAGEMENT
(Dollars in thousands)

SITE/PROJECT COMPLETION
CAPITAL OPERATING EXPENSES AND CONSTRUCTION SUMMARY

Capital Operating Expenses	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>	<u>\$ Change</u>	<u>% Change</u>
GPP	\$ 100	\$ 890	\$ 526	-\$ 364	-41%
AIP	0	0	0	0	0%
Capital Equipment	400	169	148	-21	-12%
Project Related Costs					
1. CDRs	0	0	0	0	0
2. "Bridge" Costs	0	0	0	0	0

Construction Project Summary

<u>Project Number</u>	<u>Project Title</u>	<u>TEC</u>	<u>Previous Approp.</u>	<u>FY 1997 Approp.</u>	<u>FY 1998 Approp.</u>	<u>FY 1999 Unapprop Request</u>	<u>Balance</u>
93-E-900	Long-Term Storage of TMI-2 Fuel, INEEL	\$25,500	\$18,532	\$6,571	\$ 397	\$ 0	\$ 0
91-E-600	Rehabilitation of Waste Mgmt Bldg 306, ANL	<u>11,274</u>	<u>9,208</u>	<u>2,066</u>	<u>0</u>	<u>0</u>	<u>0</u>
TOTAL, NON-DEFENSE, SITE/PROJECT COMPLETION		<u>\$36,774</u>	<u>\$27,740</u>	<u>\$8,637</u>	<u>\$ 397</u>	<u>\$ 0</u>	<u>\$ 0</u>

DEPARTMENT OF ENERGY
FY 1999 CONGRESSIONAL BUDGET REQUEST
NON-DEFENSE ENVIRONMENTAL MANAGEMENT
POST 2006 COMPLETION
(Tabular dollars in thousands, narrative in whole dollars)

PROGRAM MISSION

Environmental Management projects currently projected to require funding beyond FY 2006 are funded within the POST 2006 COMPLETION account. The Non-Defense Environmental Management appropriation, the POST 2006 COMPLETION includes funding for projects at the Oak Ridge Reservation in Tennessee and for a variety of multi-site activities.

After completion of cleanup, it will be necessary for EM to maintain a presence at most sites to monitor, maintain, and provide information on the contained residual contamination. These activities will be necessary to ensure that the reduction in risk to human health is maintained. Such long-term stewardship will include passive or active controls and, often, treatment of groundwater over a long period of time. The extent of long-term stewardship required at a site will reflect the end-state developed in consultation among DOE and other representatives of the Administration, Congress, Tribal Nations, representatives of regulatory agencies and state and local authorities, representatives of nongovernmental organizations, and interested members of the general public.

DEPARTMENT OF ENERGY
 FY 1999 CONGRESSIONAL BUDGET REQUEST
 NON-DEFENSE ENVIRONMENTAL MANAGEMENT
 POST 2006 COMPLETION
 (Tabular dollars in thousands, narrative in whole dollars)

PROGRAM FUNDING PROFILE

	FY 1997 Adjusted <u>Appropriation</u>	FY 1998 Adjusted <u>Appropriation</u>	FY 1999 Budget <u>Request</u>
Remedial Action/Release Sites	\$12,859	\$19,467	\$28,483
Facility Decommissioning	28,865	29,883	26,480
Low-Level Waste	9,997	8,173	0
Hazardous Waste	0	0	0
All Other Waste Types	0	0	0
Nuclear Material	0	0	0
Spent Nuclear Fuel	0	0	0
Facility Deactivation	12,242	8,372	8,533
Long-Term Monitoring	0	0	634
Program Support	6,583	6,740	8,638
FUSRAP	73,970	0	0
D&D Fund Deposit	0	0	0
Multi-Site	<u>10,662</u>	<u>9,659</u>	<u>11,140</u>
 TOTAL, POST 2006 COMPLETION	 <u>\$155,178</u>	 <u>\$82,294</u>	 <u>\$83,908</u>

POST 2006 COMPLETION - NON-DEFENSE - PROGRAM FUNDING PROFILE (cont'd)

	FY 1997 Adjusted <u>Appropriation</u>	FY 1998 Adjusted <u>Appropriation</u>	FY 1999 Budget <u>Request</u>
Operations and Maintenance (non-add)	[\$151,380]	[\$80,394]	[\$83,908]
Construction (non-add)	[\$3,798]	[\$1,900]	[\$0]

Public Law Authorization:

Pub. Law 95-91, DOE Organization Act (1977).

Pub. Law 99-240, The Low-Level Radioactive Waste Policy Amendments Act of 1985.

Pub. Law 105-62, The Energy and Water Development Appropriations Act, Fiscal Year 1998.

DEPARTMENT OF ENERGY
FY 1999 CONGRESSIONAL BUDGET REQUEST
NON-DEFENSE ENVIRONMENTAL MANAGEMENT
POST 2006 COMPLETION
(Tabular dollars in thousands, narrative in whole dollars)

PROGRAM FUNDING BY SITE

	FY 1997 Adjusted <u>Appropriation</u>	FY 1998 Adjusted <u>Appropriation</u>	FY 1999 Budget <u>Request</u>
ALBUQUERQUE OPERATIONS OFFICE			
Los Alamos National Laboratory (NM)	<u>\$4,000</u>	<u>\$0</u>	<u>\$0</u>
Subtotal, ALBUQUERQUE	\$4,000	\$0	\$0
OAK RIDGE OPERATIONS OFFICE			
Formerly Utilized Sites Remedial Action Program (VL)	\$73,970	\$0	\$0
Oak Ridge National Laboratory (TN)	33,190	44,940	51,597
Oak Ridge Operations Office (TN)	6,583	1,523	1,574
Oak Ridge Reservation (TN)	<u>22,567</u>	<u>21,924</u>	<u>19,597</u>
Subtotal, OAK RIDGE	\$136,310	\$68,387	\$72,768
SAVANNAH RIVER OPERATIONS OFFICE			
Savannah River Site (SC)	<u>\$4,206</u>	<u>\$4,248</u>	<u>\$0</u>
Subtotal, SAVANNAH RIVER	\$4,206	\$4,248	\$0
MULTI-SITE			
Headquarters	\$9,321	\$4,114	\$7,156
Multi-Site Programs	<u>1,341</u>	<u>5,545</u>	<u>3,984</u>
Subtotal, MULTI-SITE	\$10,662	\$9,659	\$11,140
TOTAL POST 2006 COMPLETION	<u>\$155,178</u>	<u>\$82,294</u>	<u>\$83,908</u>

POST 2006 COMPLETION - NON-DEFENSE

OAK RIDGE

I. Mission Supporting Goals and Objectives

MISSION

The Oak Ridge Operations Office (OR) directs and monitors implementation of the non defense liquid waste treatment operations at Oak Ridge National Laboratory (ORNL), and the facility deactivation and environmental restoration activities within the Oak Ridge Reservation (ORR) and several offsite properties contaminated by the Oak Ridge facility operations in Tennessee. The non-defense activities at ORR, include the deactivation of 51 surplus facilities, at the 2,900 acre ORNL to a safe, low cost, environmentally sound condition, awaiting final decommissioning. Deactivation of these facilities will reduce the risks posed by 1,400,000 curies of radioactive materials and 60 tons of sodium and lithium hydride, and reduce the annual costs for surveillance from \$10,000,000 to \$1,500,000. Not on the reservation, but contaminated due to operations at ORR, are off-site release sites, which include the Lower East Fork Poplar Creek (LEFPC) and Clinch River/Poplar Creek.

2006 STRATEGY

At ORR all remedial action sites will be completed by FY 2012. All 51 surplus facilities under the deactivation program will be completed by FY 2002. By FY 2006, 60 percent of legacy low-level waste will be disposed, cleanup of more than 50 percent of the ORR remedial action sites will be completed, including all OR gunite tanks. These activities assume a cumulative enhanced performance efficiency of about 30 percent through FY 1999. Liquid waste treatment operations will continue to treat waste as generated throughout the life of ORNL.

POST 2006 COMPLETION - NON-DEFENSE - OAK RIDGE (cont'd)

I. Mission Supporting Goals and Objectives (cont'd)

FY 1999 PROGRAM

In FY 1999 waste management activities at ORR will be included under the defense appropriation. Deactivation will continue at ORNL with the completion of an additional 10 facilities in FY 1999, leaving 25 of the 51 facilities to be deactivated by FY 2008. Monitoring of the LEFPC site will be initiated in FY 1999. A combined total of 205 remedial action assessments and 32 remedial action cleanups will be completed on the ORR in FY 1999 using the defense and non-defense appropriations.

COMPLIANCE DRIVERS

Remediation at ORNL is managed through the tri-party Federal Facilities Agreement (FFA) under CERCLA for the ORR with the EPA Region IV and the State of Tennessee. Waste Management at ORR is also governed under RCRA, NEPA, CWA, CAA, and the Federal Facility Compliance Act (FFCA), and other Federal, State, and local requirements. The regulatory agreements with stakeholders contain milestones for regulatory compliance, which are flexible to allow for modification to meet regulatory requirements.

II. Funding Schedule:

<u>Program Activity</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>	<u>\$ Change</u>	<u>% Change</u>
Remedial Action/Release Sites	\$12,859	\$19,467	\$28,483	\$ +9,016	+46%
Facility Decommissioning	20,659	25,635	26,480	+845	+3%
Facilities Deactivation	12,242	8,372	8,533	+161	+2%
Low-Level Waste	9,997	8,173	0	-8,173	-100%
Long-Term Monitoring	0	0	634	+634	N/A
Program Support	6,583	6,740	8,638	+1,898	+28%
FUSRAP	<u>73,970</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>N/A</u>
 TOTAL, Oak Ridge	 <u>\$136,310</u>	 <u>\$68,387</u>	 <u>\$72,768</u>	 <u>\$+4,381</u>	 <u>+6%</u>

POST 2006 COMPLETION - NON-DEFENSE - OAK RIDGE (cont'd)

III. Performance Summary - Accomplishments:

[PBS Numbers are Bracketed in the Text]

FY 1997

FY 1998

FY 1999

Remedial Action/Release Sites

Remedial action activities will be integrated through the use of a “watershed” approach. This approach will improve efficiencies and reduce cost by providing a comprehensive evaluation of site risk and cleanup options, as well as consolidating investigative and reporting documentation.

Carry out activities at the ORNL Bethel Valley [OR-43203]

\$12,531

\$19,305

\$24,483

• In FY 1997:

- Completed an investigation to determine the source and extent of the corehole eight plume.
- Issued and approved ROD for removal of sludges from eight of the large gunite tanks.
- Completed the Treatability Study hot tests at the North Tank Farm, followed by transfer of slurry from NTFW-4 to a South Tank Farm Consolidation Tank.
- Initiated operations to transfer tank waste to a consolidation tank in the South Tank Farm.
- Initiated modifications to the South Tank Farm facilities to prepare for waste removal and transfer of activities.
- Received approval on a ROD for the remediation of the ORNL Main Plant Surface Impoundments and initiated design.
- Planned for remediation of additional inactive Liquid Low-Level Waste (LLLW) tanks.
- Began cold testing of the equipment for sluicing of radioactively contaminated sludges from the OHF tanks.
- Initiated preparation of the Bethel Valley Watershed Remedial Investigation/Feasibility Study (RI/FS): This RI/FS will lead to a ROD in FY 1999 for the remedial action and D&D activities in Bethel Valley at ORNL.

POST 2006 COMPLETION - NON-DEFENSE - OAK RIDGE (cont'd)

III. Performance Summary - Accomplishments:

FY 1997

FY 1998

FY 1999

Remedial Action/Release Sites (cont'd)

Carry out activities at the ORNL Bethel Valley (cont'd)

- In FY 1997: (cont'd)
 - Continued S&M activities to maintain the sites in a safe condition, to protect workers and the public; to meet regulations; and to meet DOE orders.
 - Update and issued the Inactive Tanks Strategy Document.
- In FY 1998:
 - Continue sludge removal and transfer activities for the Gunit tanks and issue Treatability Study addressing sludge removal and tank wall cleaning.
 - Complete sludge removal activities for the OHF tanks.
 - Continue design and initiate field preparation activities for remediation of the ORNL Main Plant Surface Impoundments, issue EE/CA for 10 inactive LLLW tanks.
 - Initiate a CERCLA removal action to grout the contaminated soils that are the source of the corehole eight plume and to pump contaminated groundwater from existing wells that intercept the plume to slow migration of the contaminated groundwater. Prepare an EE/CA for the plume source removal action.
 - Continue the preparation of the Bethel Valley Watershed RI/FS Report and submit a draft report to the regulators for review. This RI/FS report will lead to a ROD in FY 1999 for the remedial action and Decontamination and Decommissioning (D&D) activities in Bethel Valley at ORNL. Remediate additional inactive LLLW tanks. Perform S&M for all of the release sites at ORNL in this subproject.
 - Use of electric mechanical arm and mobile robot to remove sludge and debris from Gunit Tanks.
- In FY 1999:
 - Initiate field activities for the stabilization of the corehole eight plume source and low-volume pumping from existing wells.

POST 2006 COMPLETION - NON-DEFENSE - OAK RIDGE (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Remedial Action/Release Sites</u> (cont'd)			
Carry out activities at the ORNL Bethel Valley (cont'd)			
<ul style="list-style-type: none"> • In FY 1999: (cont'd) <ul style="list-style-type: none"> - Continue sludge removal and transfer activities for 6 large Gunit tanks, the sludge will be moved to storage tanks in the active LLLW system. - Receive a decision on the final disposition of the Gunit tank shells as part of the Bethel Valley Watershed ROD. - Continue field activities for remediation of the ORNL Main Plant Surface Impoundments. Contaminated sediments will be removed offsite for disposal and the ponds will be filled and capped. - Finalize the Bethel Valley Watershed RI/FS Report and submit to the regulators for review the Proposed Plan and ROD. - Receive approval of the Bethel Valley Watershed ROD. - Prepare RAWP and perform a removal action for ten inactive tanks at the ORNL Main Plant. - Remediate additional inactive LLLW tanks. - Perform S&M activities for all of the release sites at ORNL. - Initiate a Long-Term S&M project to maintain and monitor areas after remediation is complete. - Use of electric mechanical arm and mobile robot to remediate sludge and debris from gunit tanks. 			
Carry out activities at the Offsite Remedial Actions			
In FY 1997, FY 1998, and FY 1999 conduct surface water and biological monitoring to support implementation of remedial action projects as part of the reservation-wide integrated water quality program. [OR-48101]	\$328	\$162	\$4,000

POST 2006 COMPLETION - NON-DEFENSE - OAK RIDGE (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Remedial Action/Release Sites</u> (cont'd)			
Assessments (completed)			
• In FY 1997, 31 (Mixed Defense and Non-Defense)			
• In FY 1998, 14 (Non-Defense), 6 (Mixed Defense and Non-Defense)			
• In FY 1999, 181 (Non-Defense), 8 (Mixed Defense and Non-Defense)			
Cleanups (completed)			
• In FY 1997, 14 (Mixed Defense and Non-Defense)			
• In FY 1998, 1 (Non-Defense), 7 (Mixed Defense and Non-Defense)			
• In FY 1999, 15 (Non-Defense), 7 (Mixed Defense and Non-Defense)			
Subtotal, Remedial Action/Release Sites	\$12,859	\$19,467	\$28,483

Facilities Decommissioning

Carry out activities at the ORNL Melton Valley [OR-43201]	\$2,652	\$560	\$2,237
• In FY 1997:			
- Completed and sent to the regulators, for review and comment, the Melton Valley Watershed Feasibility Study (FS). This FS will lead to a FY 1999 Record of Decision (ROD) that will establish the end state for the remediation of the Melton Valley area at ORNL and will define the projects necessary to reach that end state. This ROD will formally establish, in a legal document, the requirements for completion of Environmental Restoration activities in the Melton Valley area of ORNL. Contributed support to a Technology Development funded cryogenic barrier demonstration that will place a cryogenic barrier around the HRE Pond.			
- Completed the grouting of selected buried waste trenches at Solid Waste Storage Area (SWSA) 4 to mitigate migration of contamination into Melton Valley.			

POST 2006 COMPLETION - NON-DEFENSE - OAK RIDGE (cont'd)

III. Performance Summary - Accomplishments:

FY 1997

FY 1998

FY 1999

Facility Decommissioning (cont'd)

Carry out activities at the ORNL Melton Valley [OR-43201] (cont'd)

- In FY 1997: (cont'd)
 - Continued Surveillance and Maintenance (S&M) activities to maintain all of the Remedial Action release sites at ORNL in a safe condition until remediation is completed. These S&M activities included the release sites in Bethel Valley.
- In FY 1998:
 - Finalize the FS for the Melton Valley Watershed.
 - Complete, and issue to DOE for review and comment, the Proposed Plan for the Melton Valley Watershed. This Proposed Plan will lead to a FY 1999 ROD.
 - Initiate decision documents for a CERCLA removal action to grout radioactively contaminated sediments in the Old Hydrofracture (OHF) settling pond. This subproject is a new start in FY 1998, and has enforceable Federal Facility Agreement (FFA) milestones for FY 1998 and FY 1999.
- In FY 1999:
 - Receive approval of the Melton Valley Watershed ROD. Delay of this ROD will delay the start of field activities for most release sites in Melton Valley at ORNL. Issue Remedial Design Work Plan.
 - Perform engineering studies and design to select a grout mixture to stabilize radioactively contaminated sediments in the Old Hydrofracture Facility (OHF) settling pond. Complete Removal Action Work Plan.
 - Initiate Engineering Studies to support remedial design for the plugging and abandonment of the 50 hydrofracture injection and monitoring wells.

POST 2006 COMPLETION - NON-DEFENSE - OAK RIDGE (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Facility Decommissioning</u> (cont'd)			
Carry out activities at the ORNL Melton Valley Watershed [OR-43202]	\$14,946	\$21,094	\$17,959
<ul style="list-style-type: none"> • In FY 1997: Molten Salt Reactor Experiment (MSRE) Project <ul style="list-style-type: none"> - Began operation of the Reactive Gas Removal System (RGRS). Since blockages are slowing the removal process, three additional headers are being designed and will be installed to by-pass known blockages. In a parallel effort, chemical treatment using chlorine trifluoride is planned as a method for opening the blockages. The remainder of reactive gases will be removed during FY 1997. - Received approval of the CERCLA FS for the fuel salt removal and issued for regulator comment the CERCLA Proposed Plan. - Completed the fuel salt removal system conceptual design. - Continued the investigations necessary to ensure the feasibility of the selected method of fuel salt removal. The denaturing process has been tentatively selected to eliminate the explosive potential of the deposit in the Auxiliary Charcoal Bed (ACB). - Commenced the mock-up testing of the uranium conversion system. • In 1998: MSRE <ul style="list-style-type: none"> - Treatments of RGRS with C1F3 until blockages are removed, operate periodically the Reactive Gas Removal System to remove any gases that may be generated until the fuel salt is removed. - Denature the ACB, construct the secondary confinement structure, complete the mock-up testing, install and check out the vacuum system and transportable manipulator system, and complete the readiness assessment. - Remotely perform the preparatory work for filter media removal such as installation of the cold tap and sampling of the filter media. - Receive approval of the CERCLA Proposed Plan and the ROD. - Issue the Remedial Design Work Plan for the uranium deposit removal from the ACB. 			

POST 2006 COMPLETION - NON-DEFENSE - OAK RIDGE (cont'd)

III. Performance Summary - Accomplishments:

FY 1997

FY 1998

FY 1999

Facility Decommissioning (cont'd)

Carry out activities at the ORNL Melton Valley Watershed [OR-43202] (cont'd)

- In FY 1998: (cont'd)
 - Continue progress on the access to the drain tank cell, and complete support systems and chemistry investigations to support fuel salt removal activities.
 - Begin design of fuel salt removal hardware and removal of coolant salt (similar to the fuel salt but with no uranium present).
 - Complete the design for the uranium conversion system and mock-up testing of the system.
- In FY 1999: **MSRE**
 - Operate periodically the Reactive Gas Removal System; complete the removal of uranium deposits from the ACB, including packaging for interim storage.
 - Gain drain tank cell access, complete the design of fuel salt removal hardware and complete coolant salt removal, and start the design for salt processing.
 - Complete the conversion system fabrication, procurement, installation, and checkout.
- In FY 1999: **Old Hydrofracture Facility (OHF)**
 - Prepare and issue the Engineering Evaluation/Cost Analysis to D&D the OHF facility, which will be done as a non-time critical removal Action under CERCLA.
 - Prepare and issue the EE/CA to D&D the ORNL Reactor Cooling Towers.

POST 2006 COMPLETION - NON-DEFENSE - OAK RIDGE (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Facility Decommissioning</u> (cont'd)			
Carry out activities at the ORNL Bethel Valley D&D [OR-43204]	\$3,061	\$0	\$2,854
<ul style="list-style-type: none"> • In FY 1997: <ul style="list-style-type: none"> - Performed S&M activities to maintain facilities to be decommissioned at ORNL (includes facilities in the Bethel Valley and Melton Valley Watersheds) in a safe condition to protect workers and the public; and met regulations and DOE orders. The S&M includes facility surveillances of 46 major shutdown facilities and reactors with 165,000 sf of floor area to identify unacceptable ES&H conditions, facility maintenance to fix unacceptable ES&H conditions, and management of hazardous materials. • In FY 1998: <ul style="list-style-type: none"> - No funding in FY 1998. • In FY 1999: <ul style="list-style-type: none"> - Perform S&M activities to maintain facilities to be decommissioned at ORNL (includes facilities in the Melton Valley Watershed) in a safe condition to protect workers and the public; to meet regulations; and to meet DOE orders. S&M includes facility surveillances of 46 major shutdown facilities with 165,000 sf of floor area to identify unacceptable ES&H conditions, facility maintenance to fix unacceptable ES&H conditions, and management of hazardous materials. - Initiate and issue the Engineering Evaluation/Cost Analysis for regulator review to D&D the Fission Product Pilot Plan (FPPP) as a CERCLA Non-Time Critical Removal Action. An existing characterization report and alternatives evaluation will be used to support selection of the preferred alternative for the D&D of the FPPP. 			

POST 2006 COMPLETION - NON-DEFENSE - OAK RIDGE (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Facility Decommissioning</u> (cont'd)			
Carry out activities at the ORNL Bethel Valley D&D [OR-43204] (cont'd)			
• In FY 1999: (cont'd)			
- Initiate design activities to support the D&D of the FPPP and the Metal Recover Facility (which is the first Action following issuance of the Bethel Valley ROD).			
- Accept 14 deactivated facilities into facility decommissioning program.			
Carryout pre-decommissioning in FY 1998 and FY 1999 surveillance and maintenance to support ongoing ORNL Bethel Valley D&D activities [OR-43204]	\$0	\$3,981	\$3,430
Assessments (complete) - Funding source (shown in Parenthesis)			
• In FY 1997, 0			
• In FY 1998, 1 (Non-Defense), 1 (Mixed Defense and Non-Defense)			
• In FY 1999, 49 (Non-Defense)			
Cleanups (completed)			
• In FY 1997, 1 (Mixed Defense and Non-Defense)			
• In FY 1998, 1 (Mixed Defense and Non-Defense)			
• In FY 1999, 0			
Subtotal, Facility Decommissioning	\$20,659	\$25,635	\$26,480

POST 2006 COMPLETION - NON-DEFENSE - OAK RIDGE (cont'd)

III. Performance Summary - Accomplishments:

Facilities Deactivation

The Facility Deactivation program is responsible for the deactivation of 51 surplus facilities at the Oak Ridge National Laboratory to a safe, low cost, and environmentally sound condition. The program also conducts Surveillance and Maintenance (S&M) activities required to maintain the facilities in a safe, secure, and environmentally sound condition until deactivation is completed. Support the EM Nuclear Materials Stabilization and Stewardship activity in response need to leverage field expertise in the stewardship of nuclear materials; and support the Department's Nuclear Criticality Predictability Program (NCPP) to address implementation of DNFSB 93-2 (Critical Experiment Capability) with the long-term goal toward the objectives of improving the information base underlying prediction of criticality and serving the educational needs of the community of criticality engineers. [OR-63201]

FY 1997

FY 1998

FY 1999

\$12,242

\$8,372

\$8,533

• In FY 1997:

- Provided surveillance, monitoring, management, training, engineering support, material accountability, waste sampling and analysis, and maintenance and engineering for 50 surplus facilities.
- Completed deactivation of 6 out of 51 facilities in the Isotopes Facilities and High Ranking Facilities Deactivation Project (HRFDP).
- Produced fuel baskets for the Bulk Shielding Facility (BSF)
- Initiated BSF fuel removal.
- Removed BSF Deuterium Oxide, radioactive sources, and fission chambers.
- Isolated High Radiation Level Analytical Facility; replaced 7,700 Tanks.
- Dismantled Building 3004.
- Completed deactivation of Buildings 3019B, 3032, and 3033.
- Completed deactivation activities in Building 3026-C including disposition of 175 surplus Kr-85 cylinders and continued hot cell deactivation in 3026D.
- Drained ZnBr shield windows in Building 3026D.

POST 2006 COMPLETION - NON-DEFENSE - OAK RIDGE (cont'd)

III. Performance Summary - Accomplishments:

FY 1997

FY 1998

FY 1999

Facilities Deactivation (cont'd)

- In FY 1997: (cont'd)
 - Completed clean-out of Building 3033 and repaired roof leak.
 - Completed removal of wastes from the Y-cell in building 3038.
 - Completed clean-up from repair of cell 1 drain leak.
 - Completed replacement of in-ground filters Building 3517.
 - Initiated transfer of Cm-244 to REDC.
 - Completed plan for removal of Sn/Cs inventory.
- In FY 1998:
 - Continue S&M activities described in FY 1997 at a reduced level due to the transitioning of 14 facilities (6 deactivated facilities and an additional 8 facilities not requiring deactivation) to facility decommissioning.
 - Transfer Pu inventory to Building 3027.
 - Complete fuel removal for BSF.
 - Repair BSF roof.
 - Deactivated 3119 of unnecessary services.
 - Initiated removal of Tower Shielding facility (TSF) outdoor shields, remove 7700B and 7704 radioactive sources.
 - Move TSF activated concrete blocks.
 - Implement HRFDP facility roof repairs.
 - Deactivate BSF pool.
 - Continue deactivation of 3026, 3038, and 3517.
 - Transfer Building 3517 inventory of CM-244 to ORNL Building 7920.
 - Downgrade Building 3038 hazards classification from Category 2 nuclear to radiological.

POST 2006 COMPLETION - NON-DEFENSE - OAK RIDGE (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Facilities Deactivation</u> (cont'd)			
<ul style="list-style-type: none">• In FY 1999:<ul style="list-style-type: none">- Will provide S&M activities described for FY 1997 for 36 facilities as a result of transitioning the 14 facilities to facility decommissioning.- Deactivate 10 of the remaining facilities (including BSF and the 3026 Isotopes Facility), 26 of the 51 facilities (51 percent) will be completed by FY 1999.- Deactivate water lines in Buildings 3009 and 3117.- Drain and clean pumps in Building 3117.- Remove excess shielding and remove/repackage/recycle lead acid batteries in TSF.- Complete removal of outdoor shields at TSF.- Continue deactivation of Buildings 3038 and 3517.- Repackage Building 3517 inventory of Sr-90 and Cs-137 sources.- Support the nuclear materials stewardship program.- Institutionalization of the NCPP with defined program elements in order to close this DNFSB recommendation.			
Deactivation			
<ul style="list-style-type: none">• In FY 1997, deactivated 6 of 51 facilities.• In FY 1998, no deactivations.• In FY 1999, deactivate 10 facilities.			
Subtotal, Facilities Deactivation	\$12,242	\$8,372	\$8,533

POST 2006 COMPLETION - NON-DEFENSE - OAK RIDGE (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Low-Level Waste</u>			
Perform all necessary activities to compliantly treat liquid low-level waste generated from the Oak Ridge National Laboratory [OR-38105, OR-38112]	\$9,997	\$8,173	\$0
• In FY 1997:			
- Treated 860,000 cubic meters of liquid low-level waste, as generated.			
• In FY 1998:			
- Treat 860,000 cubic meters of liquid low-level waste, as generated..			
• In FY 1999:			
- Funding for the treatment of 860,000 cubic meters of liquid low-level waste, as generated, is in the Defense Appropriation.			
Subtotal, Low-Level Waste	<u>\$ 9,997</u>	<u>\$ 8,173</u>	<u>\$ 0</u>
<u>Long-Term Monitoring</u>			
Conduct long-term S&M of remedial actions completed as part of the ORNL Bethel Valley remedial action [OR-43203]	\$0	\$0	\$634
This activity begins in FY 1999.			
Subtotal, Long-Term Monitoring	<u>\$0</u>	<u>\$0</u>	<u>\$634</u>

POST 2006 COMPLETION - NON-DEFENSE - OAK RIDGE (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Program Support</u>			
Carry out activities of directed and offsite support [OR-48301]	\$6,583	\$1,523	\$1,574
• In FY 1997, FY 1998, and FY 1999:			
- Continue obtaining state support through the AIP and FFA. States of Tennessee and Kentucky continue to support cleanup efforts.			
- Continued to support states to provide support to cleanup activities in Tennessee and Kentucky by the M&O contractor.			
Reservation-wide activities related to contract management support, new M&I contractor transition, and environmental management are consolidated in the offsite account. [OR-4801]	\$0	\$5,217	\$7,064
Subtotal, Program Support	\$ 6,583	\$ 6,740	\$ 8,638
<u>FUSRAP Program</u>	<u>\$ 73,970</u>	<u>\$ 0</u>	<u>\$ 0</u>
This program was transferred to the Army Corps of Engineers in FY 1998.			
TOTAL, OAK RIDGE	<u>\$136,310</u>	<u>\$68,387</u>	<u>\$72,768</u>

POST 2006 COMPLETION - NON-DEFENSE - OAK RIDGE (cont'd)

Explanation of Funding Changes From FY 1998 to FY 1999:

Remedial Action/Release Sites: Increased field activities at ORNL Bethel Valley, eg. Gunitite tanks sludge removal, ORNL main surface impoundments, initiate stabilization of corehole eight plume source.
+\$9,016

Facility Decommissioning: Net increase due to Bethel Valley not having facility decommissioning activities in FY 1998; other projects being increased and decreased due to scope changes; i.e., initiation of engineering studies. +\$845

Facilities Deactivation: Increase is attributable to 10 facilities being deactivated in FY 1999 compared to 0 in FY 1998. +\$161

Low-Level Waste: The decrease in liquid low-level waste treatment reflects the consolidation of these activities in the defense appropriation in FY 1999. -\$8,173

Long-Term Monitoring: Begin long-term S&M for completed Bethel Valley remedial action projects. +\$634

Program Support: Reallocation/redistribution of reservation wide program support activities between the three appropriations, which provide funding to OR. Increase due to new M&I contractor transition. +\$1,898

Total Funding Changes, Oak Ridge **+\$4,381**

POST 2006 COMPLETION - NON-DEFENSE

SAVANNAH RIVER

I. Mission Supporting Goals and Objectives

This program activity supports remediation at the Savannah River Site (SRS), which is located in south-central South Carolina and is bordered on the southwestern side by the Savannah River. The closest major population centers are Aiken, South Carolina and Augusta, Georgia. The Heavy Water Component Test Reactor (HWCTR) facility was deactivated in 1963. Ancillary buildings and equipment were removed in 1994. National Environmental Policy Act documentation, asbestos removal and decontamination and decommissioning (D&D) began in 1995. The partially decommissioned reactor is currently scheduled for D&D surveillance and maintenance (S&M) activities, which will continue until completion of the D&D phase.

For FY 1997 and FY 1998 Environmental Restoration (ER) activities were grouped into nine Waste Area Groups (WAG). Decommissioning was WAG 9 and includes all decommissioning activities for the program.

Primary contaminants include various nuclides (particularly plutonium, tritium, and uranium), volatile organic compounds, heavy metals, and solvents. Legal drivers for HWCTR activities include Comprehensive Environmental Response, Compensation, and Liability Act, and the Federal Facilities Agreement (August, 1993).

II. Funding Schedule:

<u>Program Activity</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>	<u>\$ Change</u>	<u>% Change</u>
Facility Decommissioning	<u>\$4,206</u>	<u>\$4,248</u>	<u>0</u>	<u>\$-4,248</u>	<u>-100%</u>
TOTAL, Savannah River	<u>\$4,206</u>	<u>\$4,248</u>	<u>\$ 0</u>	<u>\$-4,248</u>	<u>-100%</u>

POST 2006 COMPLETION - NON-DEFENSE - SAVANNAH RIVER (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Facility Decommissioning</u>			
Conduct S&M and decommissioning activities at the HWCTR facility.	\$4,206	\$4,248	\$ 0
• In FY 1997:			
- Began waste certification.			
- Continued removal of small equipment.			
- Began procurement activities and engineering studies on large component removal.			
• In FY 1998:			
- Closure of the reactor dome will be completed, and the facility will be secured for long-term surveillance and maintenance.			
- Current contracting activities will be terminated.			
• In FY 1999:			
- No activity due to a shift in funding priorities. No entry into the facility is planned in FY 1999.			
Subtotal, Facility Decommissioning	<u>\$4,206</u>	<u>\$4,248</u>	<u>\$ 0</u>
TOTAL, SAVANNAH RIVER	<u>\$4,206</u>	<u>\$4,248</u>	<u>\$ 0</u>

Explanation of Funding Changes From FY 1998 to FY 1999:

<u>Facility Decommissioning:</u> Deferral of HWCTR Decommissioning project due to higher, more critical programmatic activities.	<u>-\$4,248</u>
Total Funding Change, Savannah River	<u>-\$4,248</u>

POST 2006 COMPLETION - NON-DEFENSE

MULTI-SITE ACTIVITIES

I. Mission Supporting Goals and Objectives:

MISSION

The Multi-Site Activities non-defense account includes funding for a small number of essential crosscutting Environmental Management (EM) activities. This activity consists of Program Support functions, Packaging Certification and Transportation Safety activities and the Pollution Prevention program. The support provided helps to focus National attention on several areas that impact EM-wide goals and planned efforts which cut across the DOE complex. The consolidation of these multi-site activities will allow EM to better coordinate EM-wide and DOE-wide program efforts and avoid overlaps and inconsistencies. The EM program is being responsive to the General Accounting Office (GAO) and others who have pushed for a greater emphasis on a more National focus for the EM programs.

FY 1999 PROGRAM

Headquarters

The Headquarters budget supports the direction, coordination, tracking, and implementation of the EM programs among the multitude of sites where environmental management activities are being carried out. Activities supported include technical integration activities, document review, commercial source recovery, and cooperative agreements.

Packaging Certification and Transportation Safety

The Packaging Certification and Transportation Safety program supports the first line of defense for the protection of people and property from the potential consequences of normal and accident conditions of transport involving hazardous materials. This program addresses the need for robust packages that provide containment in the event of a transportation incident or accident and the concerns of internal and external stakeholders. Activities also include developing, coordinating, and implementing policies, standards, and guidance related to aviation, maritime, rail, highway, pipeline, and hazardous materials safety. This program performs evaluations and analyses of safety analysis reports for packaging; providing external coordination between the

POST 2006 COMPLETION - NON-DEFENSE - MULTI-SITE ACTIVITIES (cont'd)

I. Mission Supporting Goals and Objectives: - cont'd

Packaging Certification and Transportation Safety (cont'd)

Department and other governmental, commercial, and international bodies regarding transportation safety and packaging certification. The program participates in the development of transportation safety and packaging standards by national and international organizations and coordinates within the Department all matters pertaining to hazardous materials package certification and transportation safety.

Pollution Prevention

The Office of Pollution Prevention coordinates pollution prevention program activities for the entire Department and provides non-defense resources to DOE Oakland operations office and Energy Technology Engineering Center (ETEC), Lawrence Berkeley National Laboratory (LBNL) and Stanford Linear Accelerator Center (SLAC). Its mission is to reduce the generation of all waste streams in order to minimize the impact of the Department's operations on the environment, reduce operational costs, and improve the safety and health of its operations. The DOE Oakland operations office independently manage pollution prevention programs at their reporting sites.

The Pollution Prevention program is part of the Office of Environmental Management's ongoing efforts and Draft 2006 Plan to reduce waste generation by the Department and enhance efficiency through cost reduction. Existing waste reduction goals for the Department are included in the Draft 2006 Plan, and a performance measure for waste reduction from environmental restoration and stabilization program activities is being finalized.

POST 2006 COMPLETION - NON-DEFENSE - MULTI-SITE ACTIVITIES (cont'd)

I. Mission Supporting Goals and Objectives: - cont'd

Pollution Prevention (cont'd)

The FY 1999 pollution prevention budget will continue to fund operations/field office programs to reduce the waste from routine operations at DOE sites. Specifically, the Secretary of Energy established the following DOE-wide goals to be achieved by December 31, 1999:

- Reduce by 50 percent the generation of radioactive waste
- Reduce by 50 percent the generation of hazardous waste
- Reduce by 50 percent the generation of low-level mixed waste
- Reduce by 33 percent the generation of sanitary waste
- Recycle 33 percent of sanitary waste from all operations
- Increase procurement of Environmental Protection Agency designated recycled products to 100 percent, except where they are not commercially available at a reasonable price or do not meet performance standards

Pollution prevention is required by Federal and State statutes and by Executive Orders including the Pollution Prevention Act; Resource Conservation and Recovery Act (RCRA); Emergency Planning and Community Right-to-Know Act (EPCRA); Executive Orders 12856, Federal Compliance with Right-to-Know Laws and 12873, Federal Acquisition, Recycling, and Waste Prevention.

POST 2006 COMPLETION - NON-DEFENSE - MULTI-SITE ACTIVITIES (cont'd)

II. Funding Schedule:

<u>Program Activity</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>	<u>\$ Change</u>	<u>% Change</u>
Headquarters	9,321	4,114	7,156	+3,042	+74%
Packaging Certification and Transportation Safety	0	4,648	3,884	-764	-16%
Pollution Prevention	<u>1,341</u>	<u>897</u>	<u>100</u>	<u>-797</u>	<u>-89%</u>
 TOTAL, Multi-Site Activities	<u>\$10,662</u>	<u>\$ 9,659</u>	<u>\$11,140</u>	<u>\$ +1,481</u>	<u>+15%</u>

III. Performance Summary - Accomplishments:

[PBS numbers are bracketed in the text]

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Headquarters</u>	\$ 9,321	\$ 4,114	\$ 7,156

- In FY 1997:
 - Provided technical support for the Residual Radioactive Code Development. [HQ-100-AA]
 - Provided support for the cooperative agreement with the Volpe National Transportation System Center on improving management systems (including core database support); the National Academy of Sciences (peer reviews on specific projects); and the Environmental Protection Agency (EPA) (CERCLA/radiation training and development of radiation site cleanup standards). [HQ-100-AA]
 - Provided Headquarters-supported field activities including technical support and program integration. [HQ-100-AA]

POST 2006 COMPLETION - NON-DEFENSE - MULTI-SITE ACTIVITIES (cont'd)

III. Performance Summary - Accomplishments:

FY 1997 **FY 1998** **FY 1999**

Headquarters (cont'd)

- In FY 1998:
 - Continue support of FY 1997 activities at a decreased funding level. The lower FY 1998 level results from a redirection of Headquarters funding to Albuquerque for an urgent funding shortfall. These redirected funds will ensure completion of the UMTRA surface cleanup effort in FY 1998. Due to this shift, some on-going Headquarter activities will be supported from the Defense account in FY 1998. [HQ-100-AA]
- In FY 1999:
 - Continue FY 1997/1998 activities. [HQ-100-AA]
 - Implement Radioactive Source Recovery Program at Los Alamos National Laboratory to address requirements of Public Law 99-240, The National Low-Level Radioactive Waste Policy Amendments Act of 1985, by recovering commercial sealed sources from across the Nation. (AL-RSRP/LANL)

Subtotal, Headquarters

\$ 9,321 \$ 4,114 \$ 7,156

Packaging Certification and Transportation Safety [HQ-PC-001]

\$ 0 \$ 4,648 \$ 3,884

- In FY 1997:
 - Funds were appropriated in the Office of Environment, Safety and Health.

POST 2006 COMPLETION - NON-DEFENSE - MULTI-SITE ACTIVITIES (cont'd)

III. Performance Summary - Accomplishments:

FY 1997 **FY 1998** **FY 1999**

Packaging Certification and Transportation Safety (cont'd)

- In FY 1998:
 - Provide the Department's corporate focus for the development of analytical tools and databases for packaging certification, analytical review of Safety Analysis Report for Packaging (SARP) for performance-oriented Type B radioactive materials packagings.
 - Complete 30 docket items related to SARP reviews, including new and revised certifications. These activities support the HQ package certification program that is mandated by 49 CFR, Subchapter C, and the Federal Hazardous Materials Transportation Law of 1994 and its predecessor Acts.
 - Complete 20 of 36 open requests for Type A package tests and analyses and Quality Assurance (QA) and Procedures Document for testing program. Based on history EM will receive 30 new requests in FY 1998. These requests will come from Nuclear Energy, Defense Programs, EM, Nonproliferation and National Security and Materials Disposition.
 - Represent the DOE in the U.S. delegation supporting international transportation safety and packaging certification regulations.
 - Test and document the results for 12 Type A radioactive materials packages (currently two open dockets, but based on history EM will receive twelve new requests in FY 1998) and update and distribute to the DOE community, the "Test and Evaluation Document for DOT Specification 7A Type A Packagings", which documents test results of approved packagings.
- In FY 1999:
 - Continue efforts to reduce the backlog of safety reviews for packagings (approximately 32 dockets are scheduled to be completed).

POST 2006 COMPLETION - NON-DEFENSE - MULTI-SITE ACTIVITIES (cont'd)

III. Performance Summary - Accomplishments:

FY 1997 **FY 1998** **FY 1999**

Packaging Certification and Transportation Safety (cont'd)

- In FY 1999: (cont'd)
 - Represent the DOE in the U.S. delegation supporting international transportation safety and packaging certification regulations.
 - Test and document the results of 7 Type A radioactive materials packages (currently carryover two dockets from FY 1998. Based on history EM will receive ten new requests in FY 1999) and update and distribute to the DOE community, the "Test and evaluation Document for DOT Specification 7A Type A Packagings", which documents test results of approved packagings.
 - Issue Certificates of Compliance, which authorize the use of the packaging by the DOE and its contractors.
 - Implement improved safety review procedures.
 - Conduct one training course supporting packaging certification.

Subtotal, Packaging Certification and Transportation Safety

\$	<u>0</u>	\$	<u>4,648</u>	\$	<u>3,884</u>
----	----------	----	--------------	----	--------------

Pollution Prevention [OPS/HQ-PP]

\$	1,341	\$	897	\$	100
----	-------	----	-----	----	-----

- In FY 1997:
 - Achieved a cost savings of \$1,979,000 from completed pollution prevention projects that were implemented by ETEC, LBNL and SLAC.
 - Reduced generation of radioactive, mixed, and hazardous waste by 254 cubic meters.
 - Reduced generation of sanitary waste by 247 metric tons.
 - Tracked and reported on DOE's purchases of EPA designated items with recycled content.

POST 2006 COMPLETION - NON-DEFENSE - MULTI-SITE ACTIVITIES (cont'd)

III. Performance Summary - Accomplishments:

FY 1997 **FY 1998** **FY 1999**

Pollution Prevention (cont'd)

- In FY 1997: (cont'd)
 - Recycled 33% of the sanitary waste generated.
 - Implemented 17 pollution prevention projects at ETEC, LBNL and SLAC.
 - Tracked and reported quarterly progress on the University of California/DOE contract pollution prevention performance measures.
 - Maintained effective site Pollution Prevention programs in compliance with Federal/State laws and Executive Orders.
 - Provided pollution prevention technical support at ETEC, LBNL and SLAC to identify and evaluate waste reduction opportunities for waste generators, and developed incentives to reduce future wastes.

- In FY 1998:
 - Propose cost savings of \$1,000,000 from pollution prevention projects that will be implemented by ETEC, LBNL and SLAC.
 - Reduce generation of radioactive, mixed, and hazardous waste by 200 cubic meters.
 - Reduce generation of sanitary waste by 200 metric tons.
 - Track and report on DOE's purchases of EPA designated items with recycled content.

POST 2006 COMPLETION - NON-DEFENSE - MULTI-SITE ACTIVITIES (cont'd)

III. Performance Summary - Accomplishments:

FY 1997 **FY 1998** **FY 1999**

Pollution Prevention (cont'd)

- In FY 1998: (cont'd)
 - Recycle 33% of the sanitary waste generated.
 - Continue and implement over 10 pollution prevention projects at ETEC, LBNL and SLAC.
 - Track and report quarterly progress on the University of California/DOE contract pollution prevention performance measures.
 - Maintain site Pollution Prevention programs in compliance with Federal/State laws and Executive Orders.
 - Provide pollution prevention technical support to identify and evaluate waste reduction opportunities for waste generators, and develop incentives to reduce future wastes.
 - Track and report waste reductions from pollution prevention activities.
- In FY 1999:
 - Track and report on DOE's purchases of EPA designated items with recycled content.
 - Track and report quarterly progress on the University of California/DOE contract pollution prevention performance measures.
 - Track and report waste reductions from pollution prevention activities at DOE sites.

Subtotal, Pollution Prevention

\$ 1,341 **\$ 897** **\$ 100**

TOTAL, MULTI-SITE ACTIVITIES

\$10,662 **\$ 9,659** **\$11,140**

POST 2006 COMPLETION - NON-DEFENSE - MULTI-SITE ACTIVITIES (cont'd)

Explanation of Funding Changes From FY 1998 to FY 1999:

Headquarters: (\$+3,042)

Increase is due to redirection of FY 1998 appropriated funds to the various field sites for essential crosscutting activities. +\$1,431

Increase in Headquarters activities is due to implementation of a Nation-wide program at the Los Alamos National Laboratory to receive, treat, and store Greater Than Class C (GTCC) sealed sources from private sector licensees to mitigate risk until GTCC disposal is available. +\$1,611

Packaging Certification and Transportation Safety: Reduction in the sufficient number of Type A package tested designs, and the number of appropriately trained individuals will be reduced. -\$764

Pollution Prevention: Reduction in pollution prevention funding is due to implementation of ten pollution prevention projects in FY 1998 and reduction in amount of waste generated. -\$797

Total Funding Change, Headquarters +\$1,481

POST 2006 COMPLETION - NON-DEFENSE - MULTI-SITE ACTIVITIES (cont'd)

DEPARTMENT OF ENERGY
FY 1999 CONGRESSIONAL BUDGET REQUEST
NON-DEFENSE ENVIRONMENTAL MANAGEMENT
(Dollars in thousands)

POST 2006 COMPLETION
CAPITAL OPERATING EXPENSES AND CONSTRUCTION SUMMARY

Capital Operating Expenses	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>	<u>\$ Change</u>	<u>% Change</u>
GPP	\$ 0	\$ 0	\$ 0	\$ 0	0%
AIP	0	0	0	0	0%
Capital Equipment	0	0	0	0	0%
Project Related Costs					
1. CDRs	0	0	0	0	0%
2. "Bridge" Costs	0	0	0	0	0%

Construction Project Summary

<u>Project Number</u>	<u>Project Title</u>	<u>TEC</u>	<u>Previous Approp.</u>	<u>FY 1997 Approp.</u>	<u>FY 1998 Approp.</u>	<u>FY 1999 Request</u>	<u>Unapprop Balance</u>
94-E-602	Bethel Valley Federal Facility Agreement Upgrades, ORNL	\$13,800	\$10,794	\$1,106	\$1,900	\$ 0	\$ 0
88-R-830	Liquid Low-Level Waste Collection & Transfer Systems Upgrade, ORNL	<u>59,897</u>	<u>57,205</u>	<u>2,692</u>	<u>0</u>	<u>0</u>	<u>0</u>
TOTAL, NON-DEFENSE, POST 2006 COMPLETION		<u>\$73,697</u>	<u>\$67,999</u>	<u>\$3,798</u>	<u>\$1,900</u>	<u>\$ 0</u>	<u>\$ 0</u>

DEPARTMENT OF ENERGY
FY 1999 CONGRESSIONAL BUDGET REQUEST
NON-DEFENSE ENVIRONMENTAL MANAGEMENT
(Tabular dollars in thousands, narrative in whole dollars)

SCIENCE AND TECHNOLOGY DEVELOPMENT

PROGRAM MISSION

The Office of Environmental Management (EM) faces technical and fiscal challenges that, without new or alternative technologies, present serious obstacles to the rapid and cost-effective cleanup of the DOE complex. The Office of Science and Technology (OST) provides new or improved technologies and research results that reduce risks to workers, the public, and the environment; reduce cleanup costs; and/or provide solutions to environmental problems that currently have no solutions. Environmental Management's major environmental problems have been identified and are the focus of technology development and scientific research. These research and development activities are referred to as Focus Areas, and the budget request and associated activities are described under the OST Defense Environmental Restoration and Waste Management Science and Technology Development decision unit.

The Non-Defense EM Science and Technology Development program supports and enhances the application and deployment of innovative EM technologies across the DOE complex. Validation, verification, and engineering analysis activities ensure needed environmental data is available to design technological solutions to DOE environmental problems. These activities ensure that funds and resources are leveraged to maximize benefits, avoid duplication of efforts, and support compliance with regulatory commitments is achieved.

Within the Non-Defense Science and Technology Development decision unit, the budget structure is organized around the following activities:

- **Validation, Verification and Engineering Analysis** - encompasses validation, verification and engineering activities to support and enhance the application and deployment of innovative EM technologies, originating from the OST Focus Areas, across the DOE complex. These activities will be conducted at the Idaho National Engineering and Environmental Laboratory (INEEL) and Western Environmental Technology Office (WETO).

PROGRAM MISSION - SCIENCE AND TECHNOLOGY DEVELOPMENT - NON-DEFENSE (cont'd)

Draft 2006 Plan

The sites' Draft 2006 Plan submissions contained approximately 500 technology needs that must be addressed in order to accomplish cleanup within the next decade. The estimated potential cost avoidance in the Plan from the use of new technology is \$12 to \$27 billion, on which EM is relying to accomplish the Draft 2006 Plan goals. Validation, verification, and engineering analysis activities support and enhance the application and deployment of innovative EM technologies across the DOE complex and ensure that EM funds and resources are leveraged to maximize benefits, duplication of efforts is eliminated, and achieve compliance with regulatory commitments, ensuring that Draft 2006 Plan goals are met.

Other

This budget request reflects input from and funding decisions by an EM corporate leadership committee that was formed as part of a ten-point action plan to facilitate widespread use of cost- and schedule-reducing alternative technologies. This Technology Acceleration Committee, comprised of senior DOE field and headquarters EM line-organization management, provides assurance that EM customer highest-priority technology needs are addressed.

DEPARTMENT OF ENERGY
FY 1999 CONGRESSIONAL BUDGET REQUEST
NON-DEFENSE ENVIRONMENTAL MANAGEMENT
(Tabular dollars in thousands, narrative in whole dollars)

SCIENCE AND TECHNOLOGY DEVELOPMENT

PROGRAM FUNDING PROFILE

	FY 1997 Adjusted <u>Appropriation</u>	FY 1998 Adjusted <u>Appropriation</u>	FY 1999 Budget <u>Request</u>
VALIDATION, VERIFICATION AND ENGINEERING ANALYSIS			
Idaho Technology Validation, and Verification Center	\$0 ¹	\$0 ¹	\$13,500
Western Environmental Technology Office	<u>0</u> ¹	<u>0</u> ¹	<u>13,000</u>
Subtotal, Validation, Verification and Eng. Anal	\$0 ¹	\$0 ¹	\$26,500
TOTAL, SCIENCE AND TECHNOLOGY DEVELOPMENT			
	<u>\$0</u> ¹	<u>\$0</u> ¹	<u>\$26,500</u>

Public Law 95-91; Department of Energy Organization Act of 1977
Public Law 105-62; Energy and Water Development Appropriations Act, Fiscal Year 1998

¹ Funding for these activities in FY 1997 and FY 1998 is included within the Science and Technology Development decision unit under the Defense EM appropriation.

DEPARTMENT OF ENERGY
FY 1999 CONGRESSIONAL BUDGET REQUEST
NON-DEFENSE ENVIRONMENTAL MANAGEMENT
(Tabular dollars in thousands, narrative in whole dollars)

SCIENCE AND TECHNOLOGY DEVELOPMENT

PROGRAM FUNDING BY SITE

	FY 1997 Adjusted <u>Appropriation</u>	FY 1998 Adjusted <u>Appropriation</u>	FY 1999 Budget <u>Request</u>
IDAHO OPERATIONS OFFICE			
Idaho National Engineering and Environmental Laboratory (INEEL).	\$0 ¹	0 ¹	\$13,500
FEDERAL ENERGY TECHNOLOGY CENTER (FETC)			
Pennsylvania	<u>0</u> ¹	<u>0</u> ¹	<u>13,000</u>
TOTAL, SCIENCE AND TECHNOLOGY DEVELOPMENT	<u><u>\$0</u></u> ¹	<u><u>\$0</u></u> ¹	<u><u>\$26,500</u></u>

¹ Funding for these activities in FY 1997 and FY 1998 is included within the Science and Technology Development decision unit under the Defense EM appropriation.

SCIENCE AND TECHNOLOGY DEVELOPMENT

VALIDATION, VERIFICATION AND ENGINEERING ANALYSIS

Idaho Technology Validation and Verification Center

I. Mission, Supporting Goals, and Objectives

In FY 1997, activities were initiated to utilize the capabilities of the Idaho National Engineering and Environmental Laboratory (INEEL) in technology validation and verification to support and enhance application and deployment of innovative EM technologies across the DOE complex. These activities will place DOE's environmental programs on a solid technical base, reduce costs, and leverage the DOE investment into broader national environmental priorities. In addition, systems engineering activities will be used in the development of disposition processes for each EM waste stream. These processes will assist EM to focus activities on accelerating cleanup needed to achieve completion/closure of sites identified in the Draft 2006 Plan; to develop alternatives to the Draft 2006 Plan baseline using innovative technologies, and to track performance of these efforts. These activities ensure that funds and resources are leveraged to maximize benefits, avoid duplication of efforts, and achieve compliance with regulatory commitments. In addition, these activities reduce cost and improve quality assurance and quality control for innovative technologies.

II. Funding Schedule

<u>Program Activity</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>	<u>\$ Change</u>	<u>% Change</u>
Idaho Technology Validation and Verification Center	<u>\$0¹</u>	<u>\$0¹</u>	<u>\$13,500</u>	<u>\$+13,500</u>	<u>N/A</u>
Total, Idaho Technology Validation and Verification Center	<u>\$0¹</u>	<u>\$0¹</u>	<u>\$13,500</u>	<u>\$+13,500</u>	<u>N/A</u>

¹ FY 1997 and FY 1998 funding for these activities are included within the Science and Technology Development decision unit under the EM Defense appropriation.

SCIENCE AND TECHNOLOGY DEVELOPMENT - VALIDATION, VERIFICATION AND ENGINEERING ANALYSIS - NON-DEFENSE
(cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Idaho Technology Validation and Verification Center</u> - (cont'd)			

Validation and Verification

In FY 1997, activities related to technology validation and verification were initiated to enhance the application of innovative technologies to meet DOE cleanup needs. Treatability studies and environmental modeling will be conducted to validate, verify and assess environmental data needed to design technological solutions to DOE environmental problems.

\$0 ¹	\$0 ¹	\$5,500
------------------	------------------	---------

- In FY 1997:
 - Funding requested under the EM Defense appropriation.
- In FY 1998:
 - Funding requested under the EM Defense appropriation.
- In FY 1999:
 - Continue studies to validate the application of innovative technologies to four key technology areas as follows: 1) Characterization Science for Optimization of Waste Processing and Monitoring; 2) Transport Aspects of Selective Mass Transport Agents; 3) Chemistry of Environmental Surfaces; and 4) Material Dynamics.

¹ FY 1997 and FY 1998 funding for these activities are included within the Science and Technology Development decision unit under the EM Defense appropriation.

SCIENCE AND TECHNOLOGY DEVELOPMENT - VALIDATION, VERIFICATION AND ENGINEERING ANALYSIS - NON-DEFENSE
(cont'd)

III. Performance Summary - Accomplishments:

FY 1997 **FY 1998** **FY 1999**

Idaho Technology Validation and Verification Center - (cont'd)

Validation and Verification - (cont'd)

- In FY 1999: (cont'd)
 - Utilize test beds to establish and validate transport for models for subsurface contamination.
 - Initiate the use of environmental simulations to verify results of environmental studies.

Systems Engineering

Systems Engineering activities will be used in the development of disposition processes for each EM waste stream which will be used to focus EM activities needed to achieve cleanup of sites identified in the Draft 2006 Plan. These activities will examine selected innovative technology's linkage to user needs to focus on critical aspects of design to ensure smooth implementation at DOE sites; and sufficient understanding and consideration of needed data and information to define performance specifications which will reduce the costs and risks associated with EM activities and shorten schedules for cleanup.

\$0¹ \$0¹ \$8,000

- In FY 1997:
 - Funding requested under the EM Defense appropriation.

¹ FY 1997 funding of \$2,000,000 for this activity is included within the Science and Technology Development decision unit under the EM Defense appropriation. FY 1998 funding of \$8,000,000 is included in the Post 2006 Decision Unit at Idaho under the Defense EM appropriation.

SCIENCE AND TECHNOLOGY DEVELOPMENT - VALIDATION, VERIFICATION AND ENGINEERING ANALYSIS - NON-DEFENSE
(cont'd)

III. Performance Summary - Accomplishments:

FY 1997 **FY 1998** **FY 1999**

Idaho Technology Validation and Verification Center - (cont'd)

Systems Engineering - (cont'd)

- In FY 1998:
 - Funding requested under the EM Defense appropriation.
- In FY 1999:
 - Provide systems engineering activities for complex-wide application to identify and evaluate integration opportunities to support attainment of accelerated cleanup goals. Focus on identification of insertion points for alternative technologies.
 - Apply systems engineering methodology to link technology development needs and activities to enhance disposition of waste and special nuclear materials.

Explanation of Changes from FY 1998 to FY 1999:

FY 1998 funding for technology validation, verification and systems engineering activities is included in the EM Defense appropriation. The validation and verification activities will be supported at a reduced level in FY 1999, due to the completion of design and construction of a demonstration test bed.

+\$13,500

Total Funding Change, Idaho Technology Validation and Verification Center

+\$13,500

SCIENCE AND TECHNOLOGY DEVELOPMENT

VALIDATION, VERIFICATION AND ENGINEERING ANALYSIS

WESTERN ENVIRONMENTAL TECHNOLOGY OFFICE

I. Mission, Supporting Goals, and Objectives

The DOE facility, Western Environmental Technology Office (WETO), in Butte, Montana, was privatized on September 30, 1996, when DOE entered into a five year research and development contract with Mountain States Energy (MSE) Technology Applications, Inc. This contract requires DOE funding totaling over \$57,000,000. The MSE workscope is focused on meeting the high priority technology needs associated with the Mixed Waste Characterization, Treatment and Disposal Focus Area and the Subsurface Contaminants Focus Area. In addition, to support these Focus Areas, MSE works as a validation and verification center for selected OST sponsored technology systems and has the capability to perform life cycle systems engineering analyses on innovative technology systems to maximize the chances of successful implementation and deployment of these technology systems.

II. Funding Schedule

<u>Program Activity</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>	<u>\$ Change</u>	<u>% Change</u>
Western Environmental Technology Office (WETO)	<u>\$0¹</u>	<u>\$0¹</u>	<u>\$13,000</u>	<u>+\$13,000</u>	<u>N/A</u>
Total, Western Environmental Technology Office (WETO)	<u>\$0¹</u>	<u>\$0¹</u>	<u>\$13,000</u>	<u>+\$13,000</u>	<u>N/A</u>

¹ FY 1997 and FY 1998 funding request for these activities is included within the Science and Technology decision unit under the Defense EM appropriation.

SCIENCE AND TECHNOLOGY DEVELOPMENT - VALIDATION, VERIFICATION AND ENGINEERING ANALYSIS- NON-DEFENSE
(cont'd)

III. Performance Summary - Accomplishments

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Western Environmental Technology Office</u> - (cont'd)			

Controlled Emissions Demonstration (CED)

The objectives of the CED project are to test thermal-treatment system leading edge off-gas-treatment components and monitoring systems in order to reduce total off-gas emissions, the hazardous components of those emissions, and to reduce associated secondary off-gas waste streams. The thermal waste treatment systems are of interest to DOE and technology transfer could extend to the private sector. The thermal driver used at MSE for this project is a 6 foot plasma arc furnace. The project is expected to continue through FY 2001.

\$0 ¹	\$0 ¹	\$2,500
------------------	------------------	---------

- In FY 1997:
 - Funding request included under the EM Defense appropriation.
- In FY 1998:
 - Funding request included under the EM Defense appropriation.
- In FY 1999:
 - Additional off-gas treatment and monitoring systems developed in the Mixed Waste Characterization Treatment and Disposal Focus Area will be tested at WETO, including low-flow combustor, hot filter system, mercury removal scrubber system, and monitoring systems. Testing will include radioactive waste.

¹ FY 1997 and FY 1998 funding request for these activities is included within the Science and Technology decision unit under the Defense EM appropriation.

SCIENCE AND TECHNOLOGY DEVELOPMENT - VALIDATION, VERIFICATION AND ENGINEERING ANALYSIS- NON-DEFENSE
(cont'd)

III. Performance Summary - Accomplishments

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Western Environmental Technology Office</u> - (cont'd)			

Subsurface Contaminant and In Situ Remediation

Radionuclide, RCRA hazardous metals and Dense Non-Aqueous Phase Liquids (DNAPLs) are major contaminants in the soil and ground water at sites throughout the DOE complex. Project activities focus on validation and verification of containment technologies such as barriers, and in situ remediation technologies such as stabilization and bioremediation in direct support of the Subsurface Contaminants Focus Area.

\$0 ¹	\$0 ¹	\$6,800
------------------	------------------	---------

- In FY 1997:
 - Funding request included under the EM Defense appropriation.
- In FY 1998:
 - Funding request included under the EM Defense appropriation.
- In FY 1999:
 - Complete demonstration of side-by-side in situ destruction techniques for DNAPLs with a Federal/private sector consortium.
 - Deliver American Society for Testing and Materials standards for thin barrier wall and verification and monitoring methodology.
 - Demonstrate verification and monitoring for deep barriers.
 - Demonstrate with DOD and the private sector a chemically resistant thin barrier wall.
 - Complete demonstrations and deliver performance specifications for reactive materials and barriers.
 - Complete performance specifications for phytoremediation techniques for SRS.
 - Complete guidance for reactive barriers with EPA, DOD, and USAF.

¹ FY 1997 and FY 1998 funding request for these activities is included within the Science and Technology decision unit under the Defense EM appropriation.

SCIENCE AND TECHNOLOGY DEVELOPMENT - VALIDATION, VERIFICATION AND ENGINEERING ANALYSIS- NON-DEFENSE
(cont'd)

III. Performance Summary - Accomplishments

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Western Environmental Technology Office</u> - (cont'd)			

Engineering Analysis and Validation

Life cycle systems analysis is critically important to understanding and maximizing the chances for successful application of all treatment, remediation, and containment technology systems. This project will focus on the analysis and validation of technology systems which are ready candidates for implementation and deployment, matching of newly developed technologies with DOE urgent clean up needs to enhance deployment opportunities.

\$0 ¹	\$0 ¹	\$3,700
------------------	------------------	---------

- In FY 1997:
 - Funding request included under EM Defense appropriation.
- In FY 1998:
 - Funding request included under EM Defense appropriation.
- In FY 1999:
 - Emphasis will be expanded to include validation and verification of ground water and soil technologies, industry program technologies, and D&D technologies and deployment of reactive and containment barriers, phytoextraction technologies, and off-gas treatment and monitoring.

¹ FY 1997 and FY 1998 funding request for these activities is included within the Science and Technology decision unit under the Defense EM appropriation.

SCIENCE AND TECHNOLOGY DEVELOPMENT - VALIDATION, VERIFICATION AND ENGINEERING ANALYSIS- NON-DEFENSE
(cont'd)

III.	<u>Performance Summary - Accomplishments</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
	<u>Western Environmental Technology Office</u> - (cont'd)			
	<u>Explanation of Changes from FY 1998 to FY 1999:</u>			

The FY 1998 budget request of \$13,363,000 for WETO is contained within the Defense Science and Technology Development decision unit. Beginning in FY 1999, funding for WETO will be requested under the Non-Defense Science and Technology Development decision unit, reflecting a wider basis for innovative technology analysis and validation activities to include the entire DOE complex under the EM programmatic mission. The decrease of \$363,000 from FY 1998 to FY 1999 reflects funding requirements for the third year of the five year contract period.